EverFocus®

Instruction Manual

ECOR 264x1 Digitalrekorder

ECOR 264x1-16

ECOR 264x1-9

ECOR 264x1-4

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Safety Precautions

- Refer all work related to the installation of this product to qualified service personnel or system installers.
- Do not block the ventilation opening or slots on the cover.
- Do not drop metallic parts through slots. This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.
- Do not attempt to disassemble the appliance. To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the appliance with care. Do not strike or shake, as this may damage the appliance.
- Do not expose the appliance to water or moisture, not try to operate it in wet areas. Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also cause electric shock.
- Do not use strong or abrasive detergents when cleaning the appliance body. Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.
- Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.
- Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where high temperature or high humidity exists. Use the appliance at temperature within indoor type DVR for 0°C~40°C (32°F~104°F) and at relative humidity between 20%~80%. The input power source for this device is 12 VDC with external power supply 100~240VAC.

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Release Date: Jan. 2010

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Windows is a registered trademark of the Microsoft Corporation.
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D-Link is a registered trademark of the D-Link Corporation.
DynDNS is a registered trademark of the DynDNS.org Corporation.
Other product and company names mentioned herein may be the trademarks of their respective owners.

ATTENTION! This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures :

•Reorient or relocate the receiving antenna.
•Increase the separation between the equipment and receiver.
•Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
•Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to operate this equipment.

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused.
This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste.
Please, dispose of this equipment at your local community waste collection/recycling centre.
In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können.
Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen.
Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre.
Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!

The information in this manual was current upon publication. The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Manufacturer is not responsible for misprints or typographical errors.
Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

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Chapter

1

1 Product Overview

This new EverFocus digital video recorder is based on H.264 compression technology, resulting in increased recording capacity and improved network image transmission speed while retaining high image quality. Comprehensive features and extended event recording settings enable the almost universal application of this DVR. The ECOR264-4/ECOR264-9/ECOR264-16 DVR permits multiple control inputs. These inputs include mouse control, front panel control, IR remote control and EverFocus keyboard (EKB500) control. Mouse control employs a simple Graphical User Interface (GUI), offering experienced PC users the similarity of interactive command of a computer-controlled device. With the GUI, users can command specific actions on the ECOR264-4/ECOR264-9/ECOR264-16 DVR through graphical icons and visual indicators. Simply point, click and drag the playback bar on the screen to playback your recordings in any time slot. All GUI functions can be operated via the front panel buttons or mouse.
The ECOR264-4/ECOR264-9/ECOR264-16 DVR is engineered for express operations. Setup, copy, search and playback recordings in seconds with a simple “point and click” on the command icons.

1.1 FEATURES

- H.264 Compression format
- Pentaplex Operation (Simultaneous live, recording, playback, archiving and remote viewing)
- User friendly GUI with graphical icons and visual indicators
- Free EverFocus DDNS Service
- Multiple Control Inputs: mouse/front panel/remote control/keyboard
- Built-in DVR calculator for fast recording estimation
- Express Setup: Menu option allows quick & easy installation
- Flexible alarm managament with schedule function independent from recording schedule
- Remote configuration support from built-in web interface
- Audio recording capabilities (audio models only)
- Supports 2 internal SATA HDD or one removable SATA HDD
- Built-in DVD burner (optional)
- 1 USB 2.0 port on front panel for video archive
- 1 USB 1.0 port on rear panel for mouse control
- Multi-language support

1.2 PACKAGE CONTENTS

Digital Video Recorder x1
User Manual x 1
AC Adapter and Power Cord x1
Mouse x 1
19" mounting brackets x1

1.3 SPECIFICATIONS

	ECOR264X1		
Channels	16	9	4
Compression Format	H.264		
Recording Rate/Resolution IPS	480 NTSC /400 PAL (CIF)	270 NTSC /225 PAL (CIF)	120 NTSC / 100 PAL in all all modes
	240 NTSC /200 PAL (Half D1)	240 NTSC /200 PAL (Half D1)	
	120 NTSC /100 PAL (D1)	120 NTSC /100 PAL (D1)	
Playback Rate/Resolution IPS	480 NTSC /400 PAL (CIF)	270 NTSC /225 PAL (CIF)	120 NTSC / 100 PAL in all all modes
	240 NTSC /200 PAL (Half D1)	240 NTSC /200 PAL (Half D1)	
	120 NTSC /100 PAL (D1)	120 NTSC /100 PAL (D1)	
Dual Streaming IPS	480 NTSC / 400 PAL total at CIF resolution		
Pentaplex Operation	Simultaneous Live, Recording, Playback, Archive and Remote Viewing		
Camera Inputs	16 BNC	9 BNC	4 BNC
Looping Camera Outputs	One per camera input (BNC)		
Video Outputs	Main VGA/BNC; Multiplex Call BNC		
Audio Input/Output (RCA)	4 Inputs / 1 Output		
Recording Mode	Manual, Schedule and Event		
Playback Search	By Date/Time and Event		
Alarm In	16	9	4
Alarm Out	4 relay output		1 relay output
Video Pause	Yes		
Video Loss Detection	Yes		
Motion Detection	Yes		
Event Log	Yes		
Watch Dog Timer	Yes		
Internal HDD	1 hot swappable or 2 internal HDD		
Built-in DVD Burner	Slim Type DVD Burner(Optional)		
User Interface	GUI(Graphical User Interface)		
OS	Embedded Linux		
Network/Protocol	Gigabit Ethernet; TCP-IP / DHCP/ PPPoE / DDNS		
Control PTZ via OSD	Yes		
USB	2 USB port (1 x USB2.0 on Front Panel, 1 x USB1.1 on Back Panel)		
Schedule Setting	Supports Express and Advanced Schedule Settings		
User Access	3 Levels of User Access Supported		
RS-232	1 x 9 pin Sub-D socket (service purpose only)		
RS-485	1 x 2 pin screw terminal connector (remote control / PTZ)		
Power Source	12VDC with external power supply 100~240 VAC		
Dimensions (L x W x H)	320 x 208.9 x 54.3 mm / 12.6" x 8.2" x 2.1"		
Temperature	0°C~40°C / 32°F~104°F (20~80% humidity)		
Certifications	CE, FCC		
Supported PTZ Protocols	EverFocus, Pelco D, Pelco P, Samsung Electr., Transparent		

1.4 FRONT PANEL

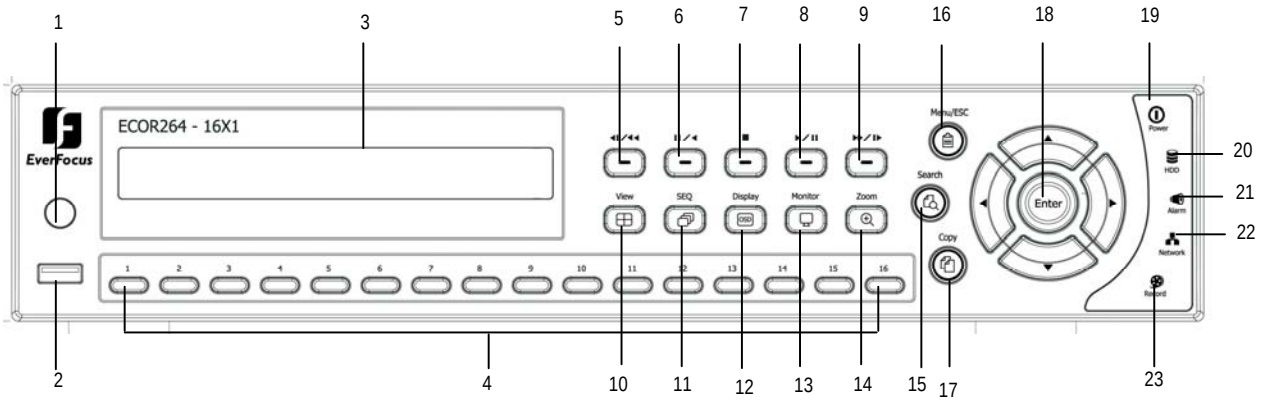


Figure 1-1 Front Panel

1) IR Receiver: Receiver for IR remote control

2) USB 2.0 (front): For connecting USB-Flash-Drive to copy/archive video or for firmware upgrades**.**

3) DVD+RW: DVD+RW burner (models with DVD option only)

4) Channel keys 1~16 (1~9, 1~4): Press channel key (**CH1~CH16**) / (**CH1~CH9**) / (**CH1~CH4**) to display that channel in full screen view.

5) ◄I /◄◄: Fast reverse playback or step reverse playback depending on playback mode.

6) I I / ◄: Reverse playback or pause

7) ■ Stop playback

8) ►/ I I: Forward playback or pause

9) ►►/I►: Fast forward playback or step forward playback depending on playback mode.

10) View: Press this key to switch between 4x, PiP (Picture In Picture),full screen, 9x, 10x, 13x and 16x.

Note: *PIP display is not available in playback mode.*

11) SEQ: Press this key to enter the auto sequential switching mode on selected monitor. For more detail about SEQ, please see “Section 3.10 Display”.

12) Display: Press this key to switch display of channels and status bar.

13) **Monitor:** **Short keypress:** Switch between Main monitor and Call monitor.
Hold key (>1 second): Switch Main monitor display between VGA and BNC output.
The deactivated output will show a message:
" The monitor is currently unavailable. Please hold "Monitor" key to switch."

14) **Zoom:** In full screen mode, 2x electronic zoom. Zoom screen can be moved through arrow keys**. Enter** key changes the direction. Pressing the zoom key again switches the electronic zoom off.

15) **SEARCH:** Press this key to enter Search Menu. For more detail about the Search function, please see “Section 3.13 Search ”.

16) **Menu/ESC:** Press this key to enter/exit **MAIN SETUP MENU**.

17) **Copy:** Press this key to enter **Copy Menu** (video data export). For more detail about Copy function, please see “Section 3.14 Copy”.

18) **ENTER/ ARROW keys:** Instead of or in combination with a mouse, you can use these keys to change the Menu settings.

19) **POWER LED:** LED ON indicates **Power** on.

20) **HDD LED**: LED ON indicates **HDD** active.

21) **ALARM LED:** LED ON indicates **Alarm** active.

22) **Network LED:** LED ON indicates **Network** active.

23) **Record LED:** LED ON indicated **Record** active.

1.5 REAR PANEL

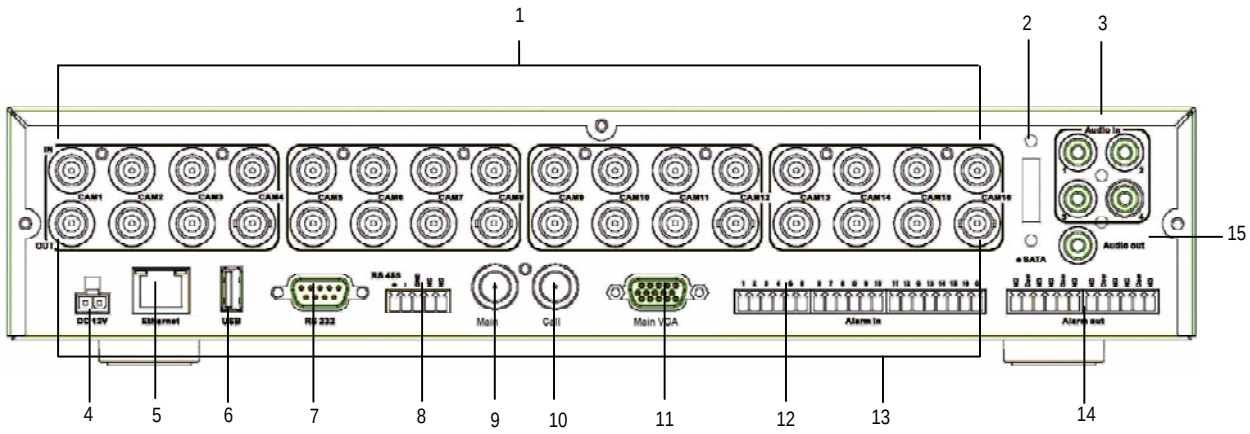


Figure 1-2 Rear Panel

1 Video In: Video input for composite signals 1 V_{pp} , BNC, automatic 75 Ohm terminated

2 E-SATA: Reserved for future application.

3 Audio In: 4 x Audio input, RCA socket for line audio signals 1V max., 10 KOhm impedance.

4 POWER: DC 12V power socket for external power supply 100 ~ 240 VAC.

5 ETHERNET: RJ-45 network connection 10/100Mb/s Ethernet. There are two LEDs on the LAN jack; Green LED means network is connected, amber LED flickers in case of traffic.

6 USB 1.0: USB port for USB mouse.

7 RS232 socket: 9-pin D-Sub control input for RS-232 for service purpose.

8 RS485 socket: Interface for remote control via RS-485 keyboards and telemetry control of connected PTZ devices.

9 MAIN: Composite BNC output for main monitor (Live/Playback/Setup).

10 Call: Composite BNC output for CALL monitor (Live only incl. multi-view).

11 Main VGA: Main monitor - connect a VGA monitor to the VGA output connection. VGA resolution is 1024x768 @ 60 Hz.

12 Alarm In: 4/9/16 (depending on model) alarm N.O. or N.C.inputs for dry contacts.

13 Video Out: Loop-through video outputs 1 V_{pp} , BNC (1:1 connected to video inputs).

Note: Make sure that the connected monitor or other video device input is terminated with 75 Ohm.
Connecting a BNC video cable at this output switches off the internal 75 Ohm termination!

14 Alarm Out: N.C / N.O relay output. (ECOR264-4: 1 x , ECOR264-9/16: 4x)

15 Audio Out: Audio output, RCA socket, line audio signal 1V max at 10 KOhm.

.

1.6 VIDEO INPUTS/OUTPUTS INSTALLATION

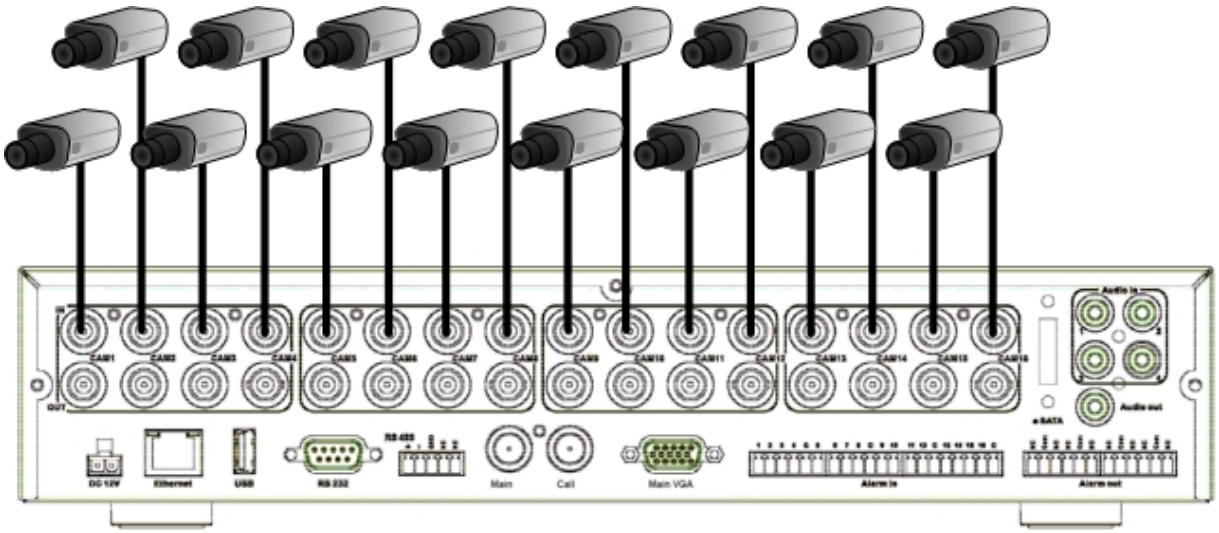
Camera and CCTV monitor must use 75 Ohm video cable (e.g. RG-59, RG-6, RG-11) with BNC connectors.

To avoid impedance mismatch and undesired loss/reflections, 50 Ohm coax cable (e.g. RG-58), antenna cable and other types of coaxial cable are not compatible.

All connected video sources must provide a 1 Vpp NTSC or PAL standard video signal.

When converting transmission lines (twisted pair, fiber optics, radio) to the video inputs, be sure to verify accurate receiver calibration and signal levels.

ATTENTION: In order for the system to auto-detect the appropriate video format (NTSC or PAL), make sure that there is a video signal on video input 1 upon power-up.



The "Out" BNC sockets allow to loop the video input signal to additional video devices.

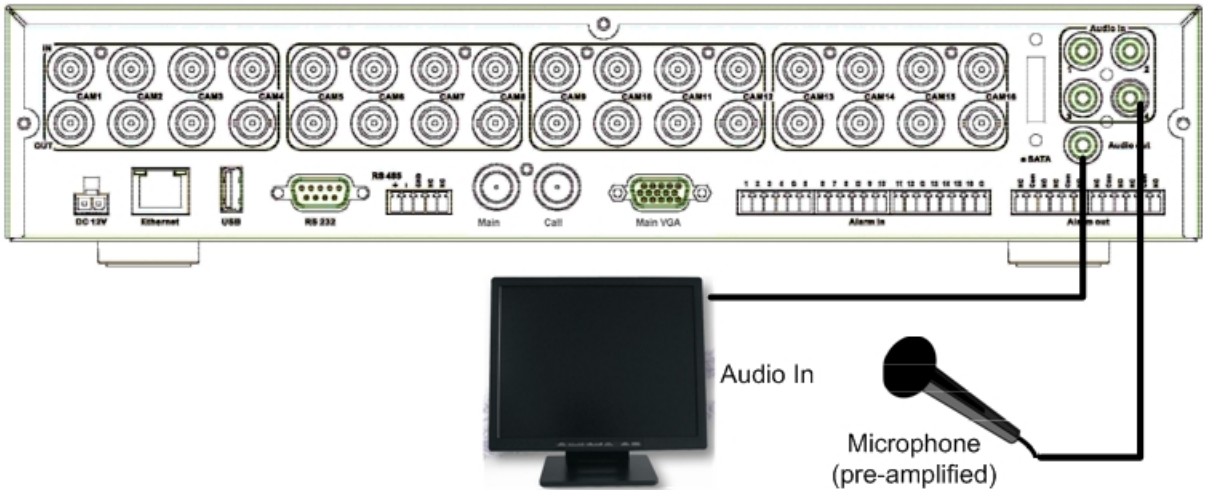
Note: Make sure that the connected monitor or other video device input is terminated with 75 Ohm.
Connecting a BNC video cable at this output switches off the internal 75 Ohm termination!

1.7 AUDIO INSTALLATION

This DVR provides 4 audio inputs and 1 audio output.

ATTENTION: The direct connection of a non-amplified microphone is not supported (a microphone amplifier is required).

The installation must be done with audio coax cable and RCA plugs.



AUDIO RECORDING FUNCTIONALITY:

The audio channels 1...4 are assigned to the video input channels 1...4 for recording, playback and network stream.

Audio recording is activated / deactivated in the Camera Menu for Camera #1~4. Please check and always comply with local laws and regulations when using audio recording.

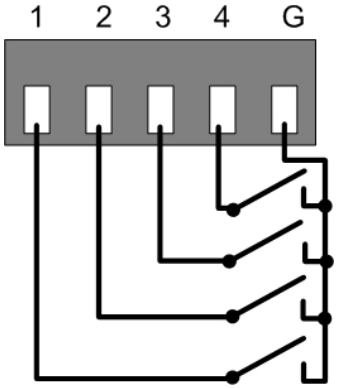
The audio channels are always recorded together with video and is independent of the image recording rate.

1.8 ALARM CONTACTS INSTALLATION

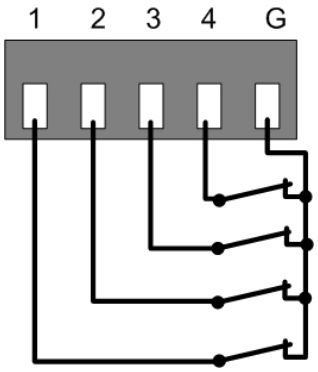
The alarm inputs can be used to start recording or for recording rate adjustment. In addition, alarm reactions such as camera display on the monitor, buzzer, e-mail and network alarm are available. The alarm output relay can be switched if required. Alarm input response actions can be controlled according to a flexible schedule.

1.8.1 Alarm Input Contacts

This DVR provides one alarm input per camera. All inputs are programmable N.O. (Normal Open) or N.C. (Normal Closed) inputs have to be switched by dry contacts.



Alarm input with N.O. (Normal Open) contact in idle state (contacts 9~16 similar)



Alarm input with N.C. (Normal Closed) contact in idle state (contacts 9~16 similar)

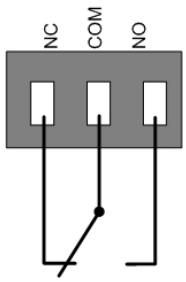
All settings are programmed in the ALARM menu (Section 4.5.1).

1.8.2 Alarm Output Relay

The relay outputs provides Normally Open and Normally Closed dry contacts.

Number of output relais:

ECOR264x1-4: 1 relay out
ECOR264x1-9: 4 relay out
ECOR264x1-16: 4 relay out



Output relay in idle state

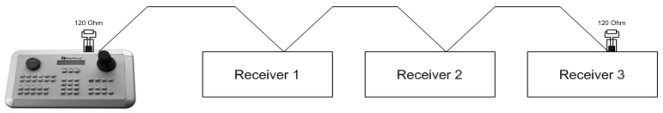
1.9 RS-485 keyboard / PTZ Installation

All functions can be remote-controlled by the EKB-500 universal keyboard. Using the EEPbus protocol, digital video recorders, keyboards and speed domes can be installed on one single RS-485 bus. One system can comprise up to 8 keyboards.

1.9.1 General RS-485 bus installation

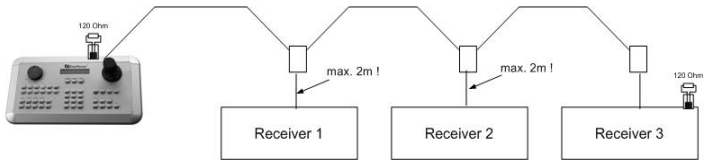
The EKB-500 keyboard uses a RS-485 simplex wiring; the signal is transferred via a single twisted pair line. CAT5 network cable is recommended, UTP version (unshielded) is sufficient for normal applications. A shielded cable should be used if the installed cables are expected to be highly susceptible to interference. The number of devices installed in one bus is limited to 32, and the maximum cable length is 3,900 feet. Both of these can be expanded using a signal distributor (see below).

Both the first and the last device in series should be terminated with 120 Ohm resistance in order to minimize line reflections.



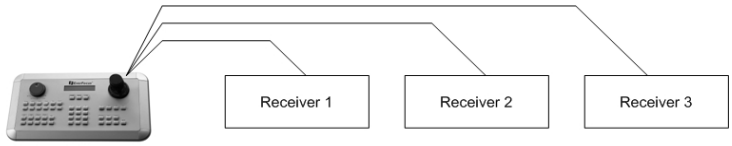
RS-485 bus serial wiring

Cable length from box to device („Stubs“) has to be limited to 2m using connector boxes.



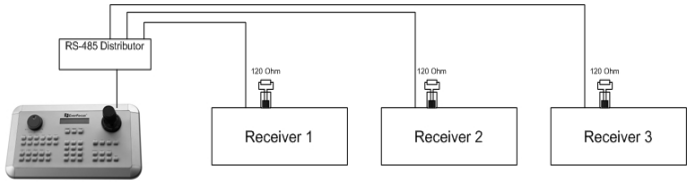
RS-485 bus serial wiring with connector boxes and connection cable

A direct RS-485 bus star wiring is not supported unless using a signal distributor (see below).



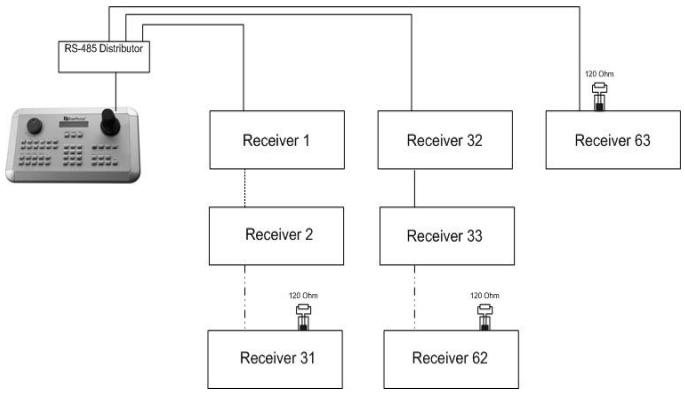
Improper RS-485 bus star wiring

A RS-485 signal distributor may be used to use a star wiring configuration.



Star wiring with RS-485 signal distributor

A RS-485 distributor can also be used to increase the maximum number of devices on the bus as well as the total range. Each distributor output provides another RS-485 bus. This allows each output to extend an additional 1200m, and it also enables the additional connection of 31 further devices to each output (the output itself represents one device).
The maximum system expandability depends on the RS-485 address range of the installed devices.

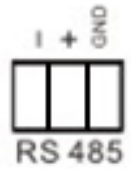


System expansion with RS-485 signal distributor

ATTENTION: Most signal distributors are unidirectional! This means that the signal only flows from the input towards the outputs. Therefore, e.g. the interconnection of several keyboards is not possible with these types of signal distributor!

1.9.2 RS-485 socket pin assignment

The RS485 pin assignment is as follows:



1.9.3 EKB-500 connection with network patch cable

For a simple, short distance installation, recorder and keyboard can be connected directly using a standard CAT5 network cable with an 8-pin connector at only one end, and at the other end the Pin 3 wire connected to RS485 “+” (plus) and the pin 6 wire connected to RS-485 “-“ (minus).

1.9.4 EKB-500 connection to several DVRs

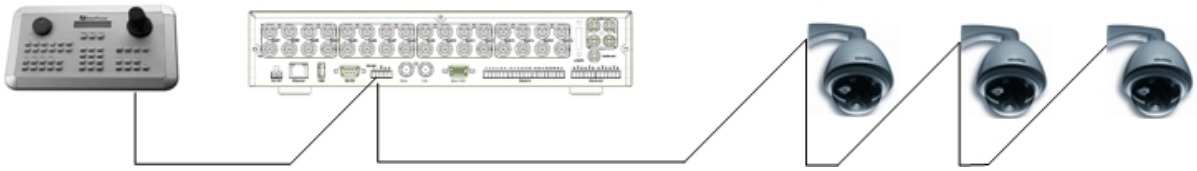
For long distance installations connecting several DVRs, please use a signal distributor to connect
For further details on keyboard connection, please refer to the EKB-500 manual.
RS-485 port communication settings are configured in the *I/O CONTROL* menu (Section 5.10.4 System Setup: I/O - control).

1.9.5 Speed Dome Installation

Speed dome or telemetry receiver pan/tilt/zoom control is available through web browser or the optional PowerCon software if the DVR is connected to a network. Local telemetry control is provided by USB - mouse control or by the optional EKB-500 keyboard.

Supported protocols: EverFocus, Pelco-D, Pelco-P, Samsung, Transparent

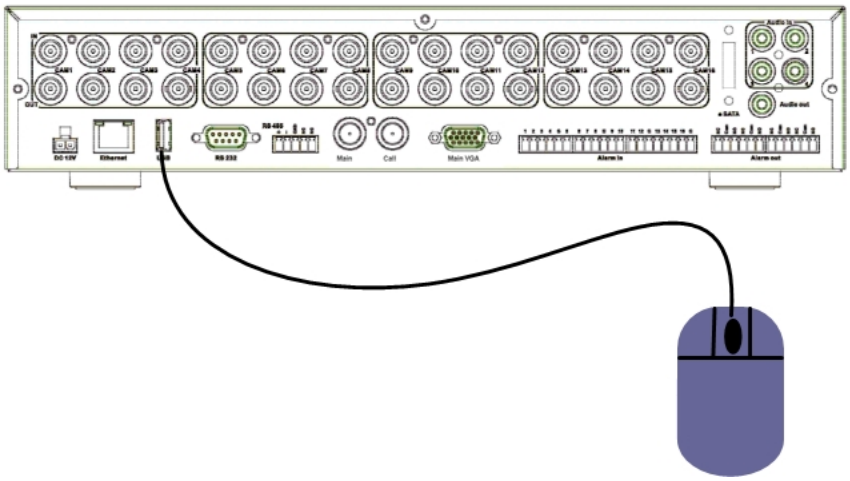
Required DVR settings: RS-485 receiver address in *CAMERA* menu (Section 4.3)
RS-485 parameters and protocol in the *I/O CONTROL* menu (Section 4.10.4)



ATTENTION: Some Pelco-D / -P protocol domes and receivers require an address offset of -1, i.e. the address assigned to the dome / receiver in the DVR camera menu must be 1 below the address set in the dome / receiver itself!

1.10USB-Mouse installation

Connect the USB mouse to one of the back panel USB port. (possible also in operation). The rear USB V1.0 port is recommended to reserve the higher speed front USB V2.0 port for video copy/export.



NOTE: Recommended mouse types are Logitech® and Microsoft® wired USB wheel-mouse. Wireless USB mouse is not supported.

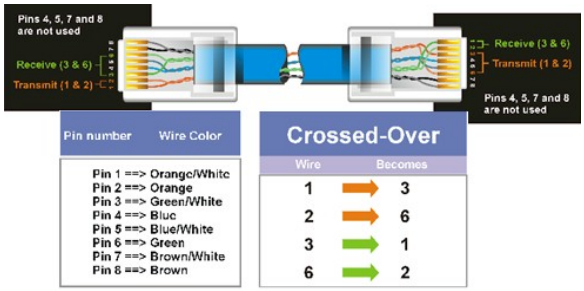
1.11NETWORK CONNECTION

This section only describes physical connection to an Ethernet network. This step must be completed before the DVR can connect to the network. There are two basic types of connection:

1.11.1 Direct PC Connection through Crossover Network Cable

The point-to-point connection of DVR and PC requires a crossover (crossed) network cable. This type of connection is ONLY used for direct connection to a single PC. Make sure that the PC is equipped with a 10/100/1000 Mbps compatible network connection.

Figure 1-3 Direct PC Connection



Pinout of crossover-cable

1.11.2 Network Connection through Patch Cable

The connection to an existing network requires a normal patch cable (straight-through). The illustration shows the connection to a network switch or router.

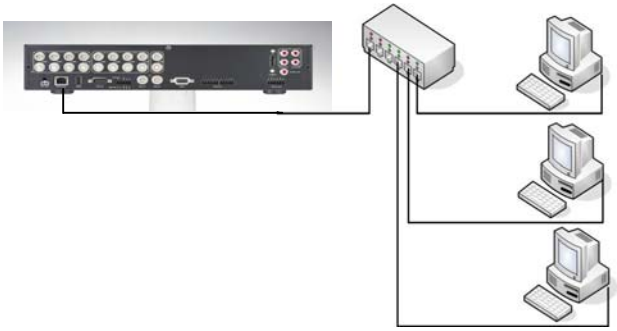
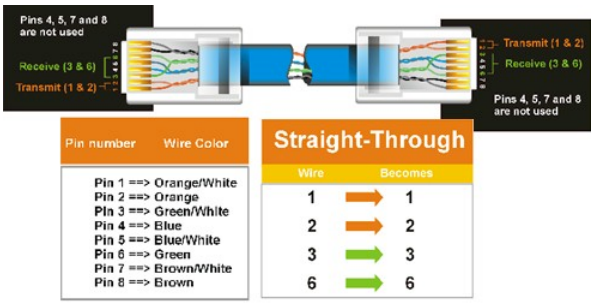


Figure 1-4 Network Connection through Patch Cable



Pinout of straight patch cable

1.12Final Install Process

Once you have completed the basic wiring connections, you are ready to turn on the DVR. Simply plug in the power source. The POWER LED will light up if power is normal. Once the system has finished loading, you can begin to set up the menu options for the DVR.

Chapter

3

2 Mouse and Front Panel Operation

ECOR264 DVRs support multiple options to control the DVR. It can be controlled with a mouse, the front panel, an EKB500, and the handheld remote control.

This chapter will cover the basic operation using the mouse and the front panel buttons.

2.1 General USB Mouse Operation

2.1.1 How to select a channel / Enable audio

1. In a view consisting of more than one channel, users can select a channel by clicking once on the desired channel screen. The selected screen will be highlighted by a white frame.
2. Double clicking on a channel screen will display full screen for this channel.
3. To enable audio out, click the audio icon (ex:) at lower side of the screen. This system has only one audio out. Click this button to enable or disable the audio-out mode.

2.1.2 OSD Root Menu

1. Right-click the mouse to obtain the DVR control bar (see Figure 2-1 OSD Root Menu). When you move the mouse over each icon, its title will be displayed at the top of the control bar.

Figure 2-1 OSD Root Menu

2. Click on any icon to perform that action. These actions are covered in detail in chapters 3 and 4.
3. Click the “X” in the top-right corner to close the DVR control bar.

2.1.3 Operation in the Configuration Menus

Click on the icon to access the Configuration Menu.

The Configuration menu screens (shown in Figure 2-2 OSD Menu) are divided into 3 main sections.

Figure 2-2 OSD Menu

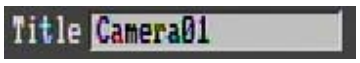
1: In section 1, there are ten setup options available. Move the mouse over an icon and click to select it.

2: In section 2, the categories for the selected icon will be displayed. Click on a choice to select it.

3: In section 3, all the options for the selected choice will be available. Click on a field to make changes.

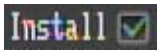
2.1.4 Field Input Options

The following are examples of different types of fields available in the Configuration menu.

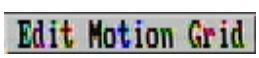


Textbox:
Click on the box and an on-screen keyboard will appear*. (see note about the on-screen keyboard below)

Dropdown box:
Click on the down arrow to see all selections, then directly click on an option to select it.



Check box: Click on the box to enable it (checked) or disable it (unchecked).



Button: Click the button to execute the function.

Bar: Click and hold on the bar to adjust the set point Left or Right.

*** Note about on-screen keyboard:**
Click on a button to input that character.
The buttons on the right and bottom have the following functions:

Space	Enter a space
Caps	Switch to capital letters
←	Delete the letter
↵	Confirm the selection
►	Move to right
◄	Move to left

2.2 General Front Panel Operation

2.2.1 How to select a channel / Enable audio

1. In a view consisting of more than one channel, use the mouse or press arrow keys (Up/Down/Right/Left) to scroll through each channel that is displayed. The selected channel will be highlighted by white frame. Pressing the “right” arrow when the last camera (4, 9 or 16) is highlighted will select all cameras.
2. While channel #1 is selected, press the “Enter” button to turn Audio On/ Off.

2.2.2 OSD Root Menu

1. Press “**Menu**” key to display the DVR control bar. Use the left/right arrows to scroll over each icon. The title for each icon will be displayed on top of the control bar.
2. Press “**Enter**” key on any icon to perform that action. These actions are covered in detail in Chapter 3
3. Press “**Menu**” to close the DVR control bar.

2.2.3 Front Panel Key Review

The basic principle of front panel operation is to use arrow keys to navigate among the menu items. Use the “**Enter**” key to confirm a selection or enter the next level menu. Press the “**Menu**” key to enter the Main Menu or exit from the current level of the menu.

2.2.4 Operation in Configuration Menu

Press “**Menu**”, use the arrow keys to highlight the “Configuration” icon, and press “**Enter**” with “Configuration” icon highlighted to bring up the Configuration menu.

NOTE: If the function "User Login" is active (menu SYSTEM / USER, chapter 4.10.3), you have to log in first. Refer to “Section 3.2 Login” for information on logging in.

The menu (shown in Figure 2-3 OSD Menu) is divided into 3 main sections.

Figure 2-3 OSD Menu

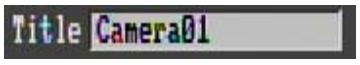
1) In section 1, there are ten setup options available. Use arrow keys to highlight an icon and press "**Enter**" to select it.

2) In section 2, the main choices for the selected icon will be displayed. Use Up/Down arrow keys to highlight a choice and press "**Enter**" to select it.

3) In section 3, all the options for the selected choice will be available here. Use arrow keys to move between items and press "**Enter**" to make changes.

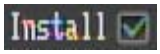
Note: press "**Menu**" button to go back to the previous menu section.

2.2.5 Field Input Options

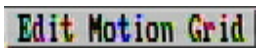


Textbox: Press **Enter** key and an on-screen keyboard will appear*. (see note about on-screen keyboard below)

Dropdown box: Press "**Enter**" key to show the available options. Use arrow keys to highlight the desired option and press "**Enter**" again to select it.



Check box: Press "**Enter**" key on a setting to enable it (checked) or disable it (unchecked).



Button: Press "**Enter**" key to execute the function.

Bar: Press "**Enter**" key to activate the slider, then use arrow keys to adjust the setting. Press "**Enter**" again to finalize the changes.

*** Note about on-screen keyboard:**
Click on a button to input that character.
The buttons on the right and bottom have the following functions:

Space	Enter a space
Caps	Switch to capital letters
←	Delete the letter
↵	Confirm the selection
►	Move to right
◄	Move to left

Chapter

3

3 General DVR Operations

This chapter introduces the operations on major functions including playback, layout change, sequence, triplex operations, copy, and search.

3.1 Record

By default, the DVR will always be in record mode. When the DVR is turned on, it will start to record. The exceptions are:

1. DVR will not record any cameras, which are not programmed as "Installed" (Refer to Section 4.3.1 for more details)
2. If a schedule is active, the DVR will follow the record settings of the schedule.

3.2 Login

In order to access ECOR264x1 options, users may be asked to log in for authority identification depending on settings for USER LOGIN (menu SYSTEM / USER, chapter 4.10.3). To log in, follow these steps.

1. Right click on the screen or press the Menu Key to display the Main Menu

2. Choose or click (or press "**Enter**" key) on the Configuration icon to bring up the following screen

(in factory settings the Login function is disabled) :

Figure 3-1 Login page

3. Select the user name from the drop-down list and input the password. The defaults are:

User name: **admin** (lower case)

Password: **11111111**

+ To input password by mouse: click the password field to bring up the on-screen keyboard (see Figure 3-2 On-screen Keyboard). Click on each button to input the desired characters for the password. When finished, click "*Done"* on the on-screen keyboard to confirm the password.

+ To input password using front panel: press "**Enter**" key to show the on-screen keyboard (see Figure 3-2 On-screen Keyboard). Use the arrow buttons to highlight each character and press the "**Enter**" key on the front panel to input the selected characters. When finished, highlight "*Done*" and press the "**Enter**" key on the front panel to confirm the password.

+ Click (or press "**Enter**" key) on the "*Login*" button to log in to the system.

Figure 3-2 On-screen Keyboard

3.3 Select Camera operation

ECOR264x1 is a pentaplex DVR; users can control each camera individually by selecting that camera. For camera selection:

Mouse: Right-click the screen, the image will show a white frame on screen if the camera has been selected. The mouse wheel browses between selected cameos.

For selection of all cameras scroll with mouse wheel to position after last or before first camera in the multi-view. All cameras will be marked with white frame.

.Front panel: Use the arrows to change the selection. Pressing the "right" arrow when the last camera (4, 9 or 16) is highlighted will select all cameras.

3.4 Change Audio output

Use arrow keys to select camera #1 and press "**Enter**" key to switch audio output on and off. An audio icon will appear on the screen. Please make sure "Record Audio" option under Camera 1~4 Basic Settings setup menu is ON if audio recording is required. Also, the audio source and/or audio output amplifier have to be connected properly in order to utilize the audio functions.

Note: For playback, network stream and video export the audio streams 1~4 are assigned to the video channels 1~4.

3.5 PLAYBACK

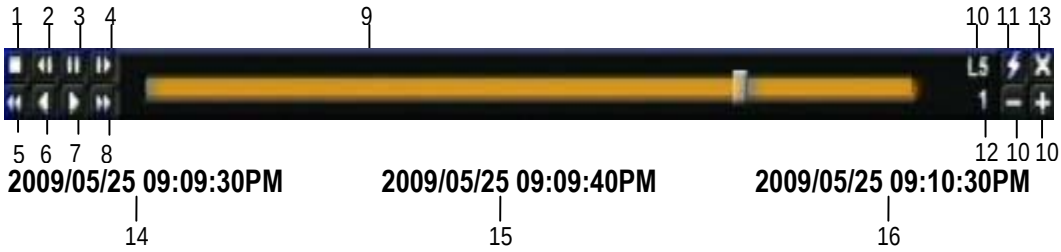
The playback bar is the fastest way to show video from the exact time which users want to see. The playback bar allows a user to see both a time line and the current playback indicator. The user can then click the time line to move the indicator to the position which they want to see. The operation is as follows:

To playback:

By mouse: Right-click to bring up the menu bar and click on to enter **Playback Menu**.

By front panel: Press key to enter **Playback Menu**.

The playback bar will show (see figure below):



1. Stop key: press to stop playback
2. Slow Reverse key: press to start slow reverse playback
3. Pause key: press to pause playback
4. Slow Forward key: press to start slow forward playback
5. Fast Reverse key: press to start fast reverse playback
6. Reverse key: press to start reverse playback
7. Forward key: press to start forward playback
8. Fast Forward key: press to start fast forward playback
9. Time bar: Move the slider on the time bar to the select time to playback (The start time and end time for time bar appears below the bar). The status of each camera is represented by different colors on the time bar. Green means normal; orange indicates a Motion; blue indicates Video Loss, red indicates an alarm event.

10. “+” and “-“ signs are used to adjust the time scale range for the bar. Press “+” or “-“ to select between scale levels L1 ~ L5. When changing level, the start time and end time of the time bar will change)
    L1: Entire time bar is 2 days
    L2: Entire time bar is 30 hours.
    L3: Entire time bar is 1 hour.
    L4: Entire time bar is 10 minutes.
    L5: Entire time bar is 1 minute.
11. Express copy: Press to start express copy when camera during playback (only one camera)
12. Playback speed indicator
13. Press “X” to close the playback bar.
14. Start time for bar (the left-most point of the time bar)
15. Current playback time (the time indicated by the slider)
16. End time for time bar (the right-most point of the time bar)

3.6 PTZ

3.6.1 PTZ control panel

If the connected camera is defined as a PTZ device (Speed Dome, PTZ head with RS-485 receiver), the PTZ control panel is shown at left side after clicking on button.

Required settings: 1. PTZ is enabled and RS-485 address is entered in CAMERA > BASIC SETTING.
2. RS-485 parameter are adjusted in SYSTEM > I/O CONTROL

Pan / Tilt direction keys
Zoom in (+), Zoom out (-)
Focus far (+), Focus near (-)
Iris open (+), Iris close (-)
Input field for preset, tour and pattern numbers
Number buttons
Clear numeric input
Start (for preset, tour, pattern)
Save preset position
Delete preset position
Auto-Pan
Preset position
Preset Tour
Pattern

Go to Preset Position	PRESET > [number] > GO
Save Preset Position	PRESET > [number] > SET
Delete Preset Position	PRESET > [number] > DELETE
Start Preset Tour	TOUR > [number] > GO
Start Pattern	PATTERN **Note:** The PATTERN commands vary depending on dome model /manufacturer. Please consult documentation of the speed dome for details.
Start Auto-Pan	AUTO-PAN
Open Setup Menu	PRESET > [95] > SET
Enter in Speed Dome OSD	I+ ((iris open)
ESC / Cancel in Speed Dome OSD	I- (Iris close)

NOTE:
Click "**X**" at the top-right corner to hide the PTZ menu (see Express control below)
Click "**Exit**" to leave PTZ function.
"**X**" only HIDES the PTZ control panel. "**EXIT** " closes the panel *and* exits PTZ mode!! Other controls will not respond until you EXIT the PTZ panel !

3.6.2 PTZ Express Control

If the PTZ control panel/menu has first been opened and then hidden, the mouse can be used to control basic PTZ functions (Quick Mouse Control).
The mouse cursor will change to different icons in different areas of the screen. With Quick Mouse Control, the user can control PTZ direction, zoom, and focus by clicking directly on screen.
The screen is divided into 16 areas, with the outer ring is divided into 12 zones used to control movement direction. The inner square of 4 areas is used to control zoom and focus.

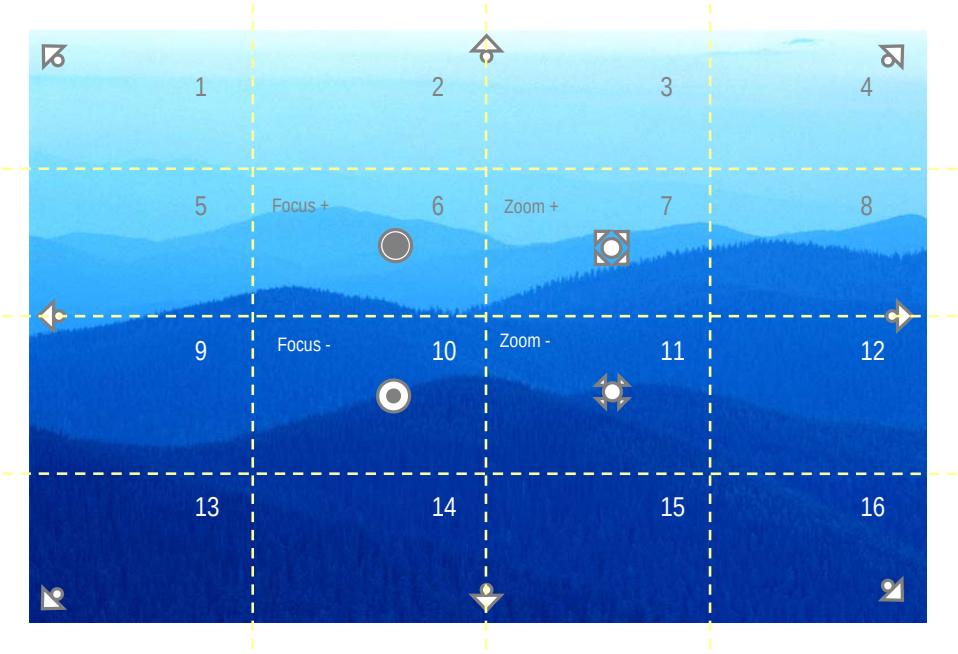


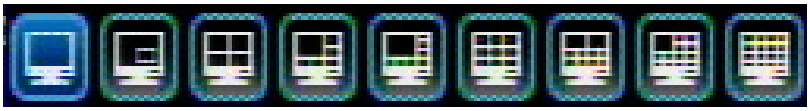
Figure 3-3 Express Control PTZ

The screen is divided into a 4x4 grid. The function of each section is defined as below:

- 1: PTZ pan/tilt left and up
- 2, 3: PTZ tilt up
- 4: PTZ pan/tilt right and up
- 5, 9: PTZ pan left
- 8,12: PTZ pan right
- 13: PTZ pan/tilt left and down
- 14, 15: PTZ tilt down
- 16: PTZ pan/tilt right and down
- 6: Focus closer
- 10: Focus further
- 7: Zoom in
- 11: Zoom out

3.7 SCREEN LAYOUT

The ECOR264 DVR provides different multi-view layouts. The different available layouts are shown below (image shows 16channel version):



NOTE: PIP display is not available in Playback mode

To change layout, follow the steps below:

By mouse: Right-click to bring up the menu bar and click then click on the desired layout choice.

By front panel: Push the "View" button on the front of the DVR to scroll through each display format.

3.7.1 Bring to full screen mode

By mouse: Double left-click on the selected channel to put that camera in full screen mode.

By front panel: Press any channel key to bring that channel to full screen mode.

3.8 CHANNEL SWITCHING

Use this function to change channel position

1. Select one camera
2. Press Channel button .

3. Click on the channel number you wish to select on the channel bar. The display in that position will be switched.

EX: Select camera1 and enter Channel menu and choose "2", then camera 2 will show on position of camera 1, camera 1 will show on position of camera 2.

3.9 STATUS DISPLAY

1. Press Display button on menu by using mouse.

2. Press again to show status information. Please see the following table for status representation.

Recording	Playback	Fast forward	Fast backward	Back	pause
Alarm	Motion	Video loss	Express copy	Audio out	

3. Press again to show status information. Please see the following table for status representation.

Alarm	Audio	Event	HDD failure	HD temp. too high	Seq.
Motion	Video loss	No network			

4. Press again to show both status information and camera information.

5. Press again to hide all information.

3.10 SEQUENCE

1. By mouse: Click Sequence button to enter the auto sequential switching mode.
2. By front panel: Press the Sequence button on front panel to enter the auto sequential switching mode.

3.11 Monitor Switching

The DVR can connect to main monitor and call monitors simultaneously, but only one of them can be controlled at one time. This feature allows user to switch control between three monitors.

Switch control by using a mouse
Click on “Monitor” button in menu for toggling operation between MAIN and CALL monitor.
Status display of MONITOR button:

: The MAIN monitor is selected. Press the button for switching to CALL monitor operation.

: The CALL monitor is selected. Press the button for switching to MAIN monitor operation.

Switch control from front panel
Click “Monitor” button on front panel to toggle monitor control between MAIN and CALL monitor.

Note: Holding *MONITOR* key (>1 second) will switch Main monitor display between VGA and BNC output. The deactivated video output will show a message:
" The monitor is currently unavailable. Please hold "Monitor" key to switch."

Operation of Call Monitor OSD

If the CALL monitor is selected, the OSD main menu will be limted to the functions, which are available at CALL monitor (no playback / search / copy / setup functions).
The OSD menu is shown on MAIN monitor.

View	Click this button to change the multi-view mode.
Change	Switch channels.
Display	Turn OSD display on/ off.
Sequence	Turn sequence on/off.
Monitor	Click this button switch control to main monitor.

3.12 ELECTRONIC ZOOM

1. Make sure, that no camera is in playback mode
2. Select one camera
3. Right-click to bring up the menu bar and click button.

4. When in ZOOM mode, the mouse cursor will change to a different icon in different areas of the screen. Users can control the portion of the magnified image to be displayed by clicking directly on screen:

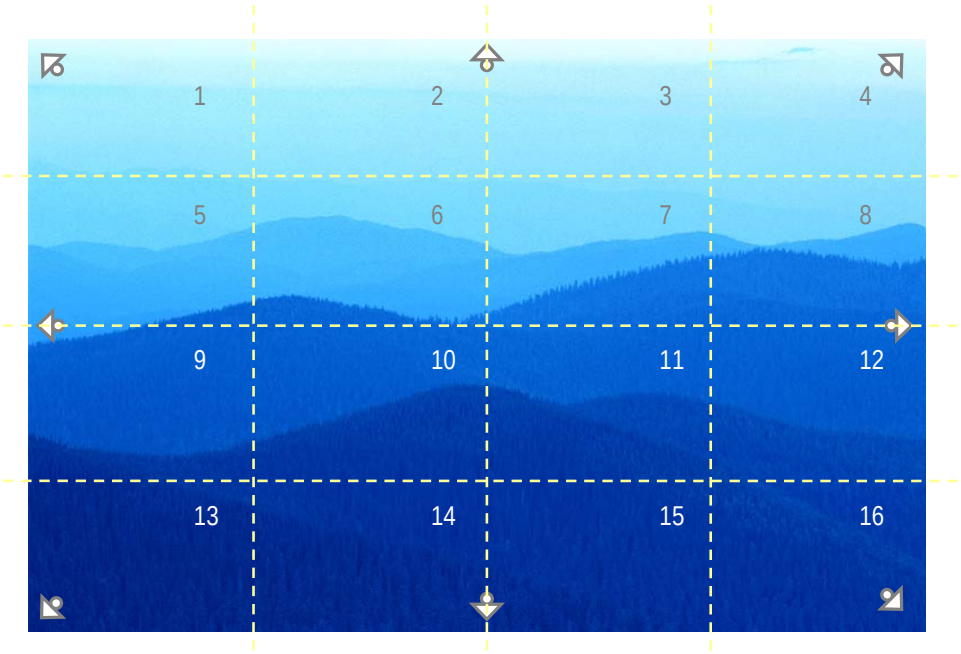


Figure 3-4 Zoom Express Control

The screen is divided into a 4x4 grid. The function of each section is defined as below:

- 1: Left and up
- 2, 3: Up
- 4: Right and up
- 5, 9: Left
- 8,12: Right
- 13: Left and down
- 14, 15: Down
- 16: Right and down
- 6, 7, 10, 11: Not used

3.13 SEARCH

By mouse: Right-click to bring up the menu bar and click to enter **Search Menu**.

By front panel: Press "**Search**" key to enter Search Menu directly.

3.13.1 Time Search

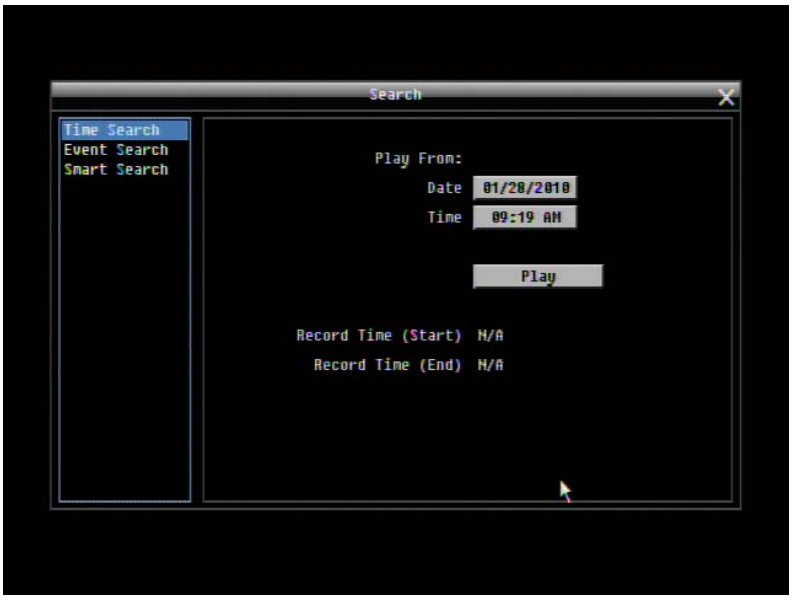


Figure 3-5 Search Menu – Time Search

Play From: Select the time to begin the search by choosing the Date and Time.

Click on the "**Play**" button to start the search. The DVR will automatically play the video being searched. The DVR will play the nearest time if there is no data in selected time.

In search playback mode, press the "**Stop**" button to return to the search menu.

3.13.2 Event Search

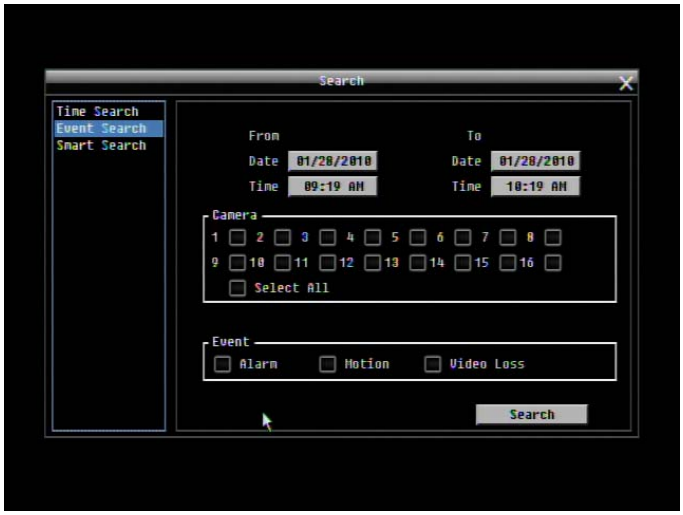


Figure 3-6 Search Menu – Event Search

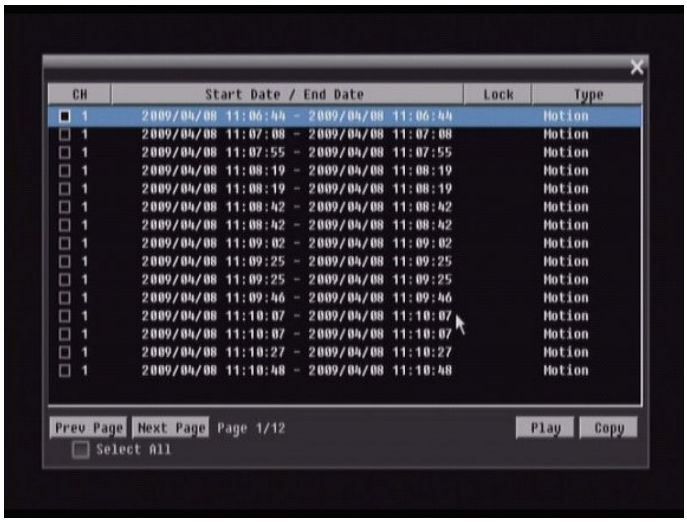
From Select start date and time

To Select end date and time.

Camera Select which cameras to search for.

Event Select which event type(s) to search for. Choose from Alarm, Motion, Video Loss, or Others.

Click on the "**Search**" button to start searching. The search results will be shown as a list of events.



Prev Page Go to previous page

Next Page Go to next page

Play Playback selected item

Copy Copy selected item

3.13.3 Smart Search

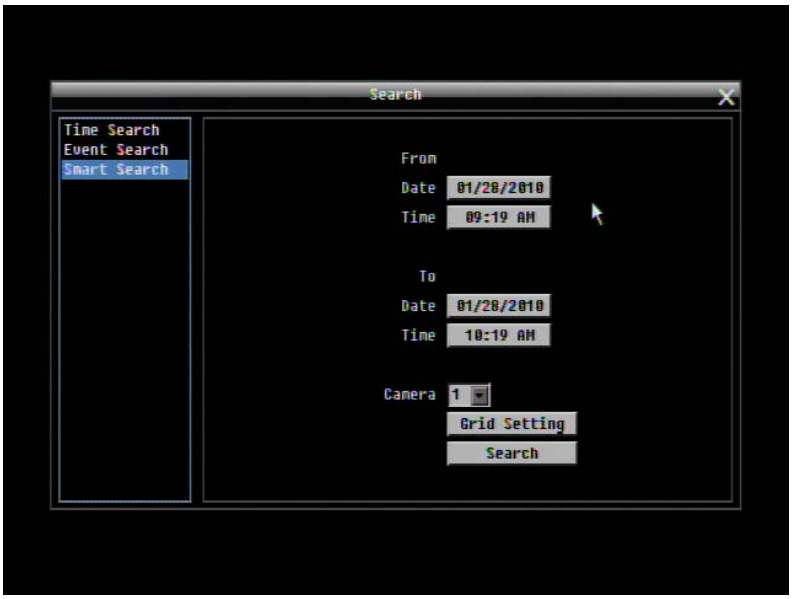


Figure 3-7 Search Menu – Smart Search

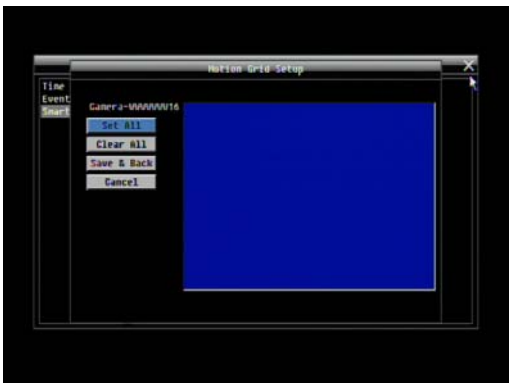
From	**Date**	Select start date
	Time	Select start time
To	**Date**	Select end date
	Time	Select end time
Camera		Select which cameras to search for.
Grid Setting		Press Grid Setting button to get motion grid setup window.
Edit Motion Grid		Press this button to edit the motion grid (See Figure 4-5 Camera Menu – Motion Grid Setting).

Set All: Press this button to select the entire area.

Clear All: Press this button to clear all the grids selected.

Save & Back: Press this button to save the motion grid setting and return to motion setting menu.

Cancel: Press this button to cancel all changes and returns to the motion setting menu.



How to select motion grid by mouse:

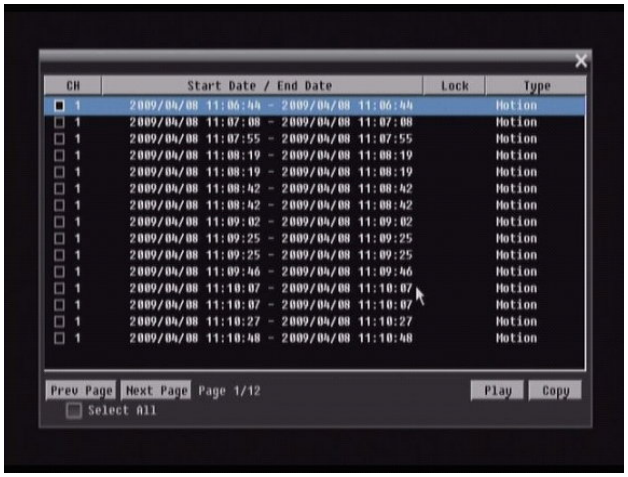
1. Select lower-right grid.
2. Select upper-left grid.
3. The area between upper-left and lower-right grid will be selected.

How to select motion grid by front panel:

1. Press Enter key to enter motion grid.
2. Use arrow keys to select one corner of desired area
3. Press Enter key at the starting point.
4. Use arrow keys to select motion area.

Press Enter key twice at the end point, and the area will be selected.

Search Click on the "**Search**" button to start searching. The search results will be shown as a list of events.



Prev Page Go to previous page

Next Page Go to next page

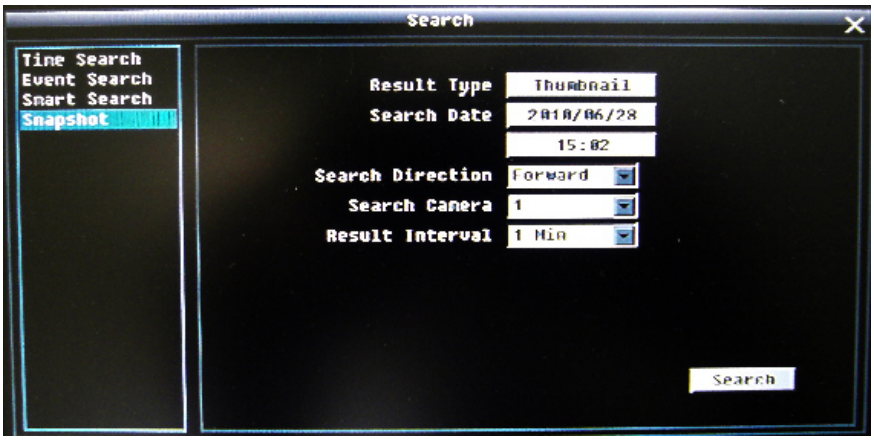
Play Playback selected item

Copy Copy selected item

3.13.4 Snapshot Search

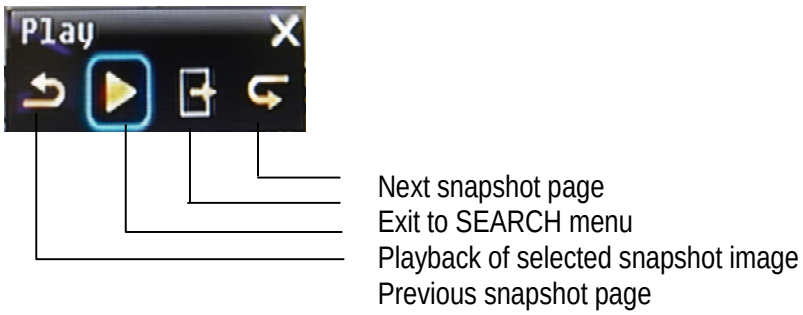
The new SNAPSHOT SEARCH provides a time-saving method for playback evalutation of a single camera. The search result provides a page(s) with 16 preview thumbnails in free adjustable interval. The interval settings allow settings up to one day, so that one preview page can show changes in scenery over max. 16 days.

Search menu Page:



Search Date Enter start date and time of the search
Search direction Backward: The search will be proceeded before entered start date/time.
Forward: The search will be proceeded after entered start date/time.
Search camera Select a camera for the Snapshot search.
Result interval Enter the interval time between the thumbnail images, range 1 min.~1 day.

Operation icons in Snaphot search result:



Note: The Snapshot search in available only in local operation, not in web browser operation.

3.14 COPY

To bring up Copy menu:

By mouse: Right-click to bring up the menu bar and click on to enter **Copy Menu**.

By front panel: Press the "**Copy**" key to enter Copy Menu directly.

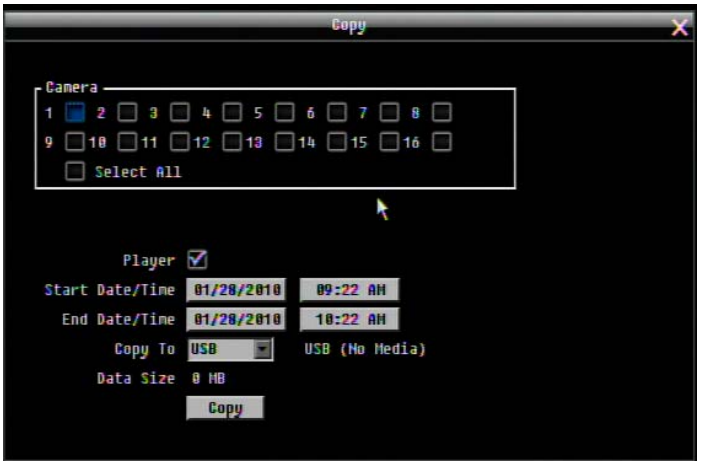


Figure 3-8 Copy Menu

Camera	Select which camera will be archived. Choose "**Select All**" to select all the cameras.
Player	Check the box to include the ePlayer program as part of the copy (recommended)
Start Date/Time	Select the start date/time to be archived.
End Date/Time	Select the end date/time to be archived.
Copy To	Select whether you want to copy to USB or CD/DVD (DVR models with DVD option only).
Data Size	Shows the estimated total file size for the time period.
Copy Now	Press "**Copy**" button to start archiving.

3.15 LOGOUT

Right-click to bring up the menu bar and click the button to bring up the **Logout Confirmation window** (see Figure 3-9).

Figure 3-9 Logout Confirmation window

Press "**Yes**" button when you are ready to logout from the system. You will need to login again before accessing any other options.

Chapter

4

4 DVR Configuration

This chapter explains the DVR Menu Settings step by step.

4.1 Configuration Menu

1. To bring up the Main Menu, press the "**Menu**" key on the front panel or right-click with the USB mouse to bring up the OSD menu bar.
2. Press "**Enter**" or left-click on the "Configuration" icon " " to enter the Configuration Menu.

4.2 EXPRESS

The Figure 4-1 Express Menu is a screenshot of the **EXPRESS SETTING MENU**. This menu is used to configure global express settings for all cameras. For example, if user selects Event Only in Record Mode and presses the "**Apply**" button, all 4/8 cameras will be set to Event only. If user selects Blank in Recording Mode and presses the "**Apply**" button, cameras will keep their own current individual record settings without any changes.

Figure 4-1 Express Menu

Date Sets the current date of DVR.

Time Sets the current time of DVR.

Record Mode

Normal+Event Normal recording plus event recording.

Event Only Event recording only.

Schedule Rec Schedule recording.

Estimate event hours Enter the number of hours per day for the estimated event recording.

Resolution Select recording resolution based on video standard.

NTSC 704x480 / 704x240 / 360x240

PAL 704x576 / 704x288 / 360x288

Record With

Preset Settings Select preset setting or recording quality. Available options are Best Quality, Standard and Extended Record in the next column. For more detail, please refer to APPENDIX B: RECORDING VALUE SELECTION RULES

Recording Days Set the maximum recording days. Available selection will be shown in the next column, including 1, 3, 5, 7, 14, 20, 30, 40, 50 and 60 days. DVR will auto adjust relative settings for all the cameras to fit the selected max recording days. For more detail, please refer to APPENDIX B: RECORDING VALUE SELECTION RULES

Network Type

Static IP User sets a static IP for network connection.

DHCP DHCP server in LAN will automatically assign IP for network connection.

PPPoE This is for direct DSL connection application ONLY (no router). Check with your ISP to see if they use PPPoE.

IP Address This field shows the current IP Address for the DVR. If Fixed IP address is used then this value must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

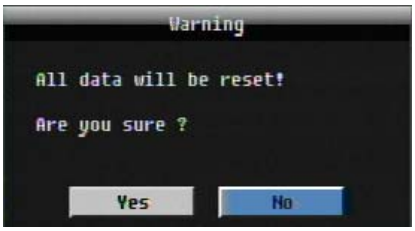
Subnet Mask This field shows the subnet mask for your network so the DVR will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway This field shows the gateway for your network so the DVR will be able to communicate outside the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS server 1 This field shows the primary DNS server for your network. When DHCP is selected and an internet connection is available, this value will be assigned automatically. **This field must be assigned correctly if you plan to use the DDNS feature** (see Section DDNS for more details).

DNS server 2 This field shows the secondary DNS server for your network.

Apply Press "**Apply**" button to save and apply the Express settings to DVR. The system will automatically adjust recording frame rate according to your settings. The following message will pop up;



press "Yes" to change Resolution, Recording frame rate and Quality depending on your Express settings.

Note: If parameters in EXPESS menu are entered, the changed parameters can be verified in the related SETUP menus (e.g. menu CAMERA).

If EXPRESS menu is closed and re-opened again, the menu will not show the canges, it will show always factory settings!

4.3 Camera Setting

Figure 4-2 is a screenshot of the **CAMERA SETTING MENU**. This menu is used to configure individual camera settings.

Figure 4-2 Camera Menu-Basic Setting

4.3.1 Basic Setting

Camera Select the camera number.

Title The title setting allows you to assign a title to selected camera. Each title supports up to 16 characters. The on-screen keyboard will appear when you click the title option.

Install Check the box to enable the current camera. To take full advantage of the DVR's recording abilities, any unused cameras should have this option set to "disabled".

Covert Check the box to hide the camera picture in live and sequence modes. However, the image will still be recorded and **can be played back by any user who has playback rights**.

Record Mode 2 record modes are available.
Normal + Event This recording mode includes continuous and event recording.
Event Only Video will be recorded only when events occur.

Resolution Select recording resolution based on video format.
NTSC 704x480 / 704x240 / 352x240
PAL 704x576 / 704x288 / 352x288

Record Quality Select an image quality for recording. There are five different qualities available: Superior, High, Standard, Basic and Low.
A higher image quality uses more HDD space.

Normal Speed Frame rate in images per second (IPS) for continuous recording. The speed is limited to the maximum recording rate of the DVR (displayed in the bottom left corner) divided by the number of installed cameras. If the resolution option is changed, the unit of this field will also be changed.

Recording capacity for all cameras *(shown next to the Normal Speed field)*

The number here indicates the remaining recording capacity available for all cameras. When this number is positive, it means there is still recording capacity. If this number is negative, it means the recording capacity has been exceeded, and the user must lower a Normal Speed recording rate or reduce the Resolution selected (which allows the DVR to record more FPS). This number must be positive before saving the changes. Otherwise, a pop-up window will display "Total FPS exceed maximum recording rate, discard changes!" and the settings for all cameras will return to previous values.

Event Speed Maximum desired frame rate in images per second (IPS) for event recording; if more than one camera requires simultaneous event recording, the total for all cameras cannot exceed the maximum available FPS for the DVR at that resolution setting, and the available FPS may be divided across the cameras.

Record Audio (Camera 1~4 screen only) Check this box to enable audio recording for this channel. The audio inputs are assigned to video channels 1~4.

PTZ ID When using a PTZ Camera, in order to control the camera from the DVR this ID must match the RS-485 ID used by the connected camera. Click "On" to confirm selection, "Off" to cancel PTZ control for this camera. When PTZ ID is ON, a drop down menu will appear; set the PTZ ID address used to control this camera in that menu.

Apply To This button can be used to copy the recording settings to other cameras. Select which camera(s) you wish to copy to.

"Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

4.3.2 Video Adjust

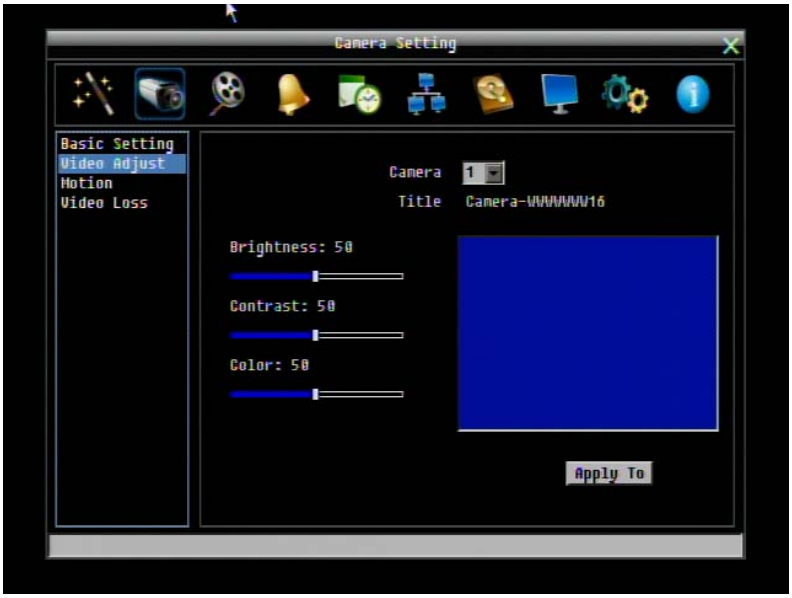


Figure 4-3 Camera Menu – Video Adjust

Camera Select the camera you wish to adjust. “Title” will show the name of the selected camera.

Brightness Adjusts how bright/dark the picture appears. If details appear to be lost in the shadows or darker regions, try increasing the Brightness. If the image appears too saturated or if the colors appear overwhelmed by glare, try decreasing the Brightness.

Contrast Adjusts the contrast in the selected video channel. If details are lost or lines appear distorted, try decreasing the contrast.

Color Adjusts the color tone in the picture.

Apply To This button can be used to copy the video settings to other cameras. Select which cameras you wish to copy to.

"Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

4.3.3 Motion

Figure 4-4 Camera Menu – Motion

Camera Select the camera you wish to adjust. "Title" will show the title name of the selected camera.

Enable Check box to enable motion detection.

NOTE: Other motion options will not be available unless this feature is selected.

Log Check this box to record motion events in the log.

Main Monitor Main monitor display options when a motion event occurs.

No change No change on the main monitor display.

Full screen A full screen of the event camera will display on the main monitor.

Call Monitor Call monitor display options when a motion event occurs.

No change No change on the call monitor display.

Full screen A full screen of the event camera will display on the call monitor.

Pre-alarm Record Check box to start copying recorded video to the hard disk from several moments before the motion event. (Pre-alarm recording rate will follow "**Normal**" frame rate setting)

Buzzer Check this box to enable the buzzer when a motion event is triggered.

Email Notify Check this box to send email notification when a motion event is detected. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen

Network Alarm Check box to send out a network alarm to client PC when motion occurs. (requires PowerCon software and correct settings for the Alarm Server in the Network Setup menu)

Auto Lock Check the box and the events will be recorded in the write protected segment of the Hard Disk. (DVR will lock a period of time when alarm happen, the length of time will

depend on DVR setting)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action when motion is triggered.

Timeout Alarm output lasts for the set time duration.

Permanent Alarm will remain active until user presses the **"Enter"** key or resets the alarm remotely.

Transparent Alarm output remains as long as the alarm input is active.

Trans+Timeout Alarm output continues until event ends, then continues for the set time duration.

Timeout Duration Time duration selectable from 1 to 150 seconds.

Edit Motion Grid Press this button to edit the motion grid (See Figure 4-5 Camera Menu – Motion Grid Setting).

Sensitivity Set the threshold value for sensitivity within the grids. Select from 1 (lowest) to 10 (highest).

Min Area To avoid false detections by small objects this value defines how many grids have to be exceed threshold before generating a motion event. Select a value between 1 (default) to 5 grids.

Preview Preview the motion grid.

Set All Press this button to select the entire area.

Clear All Press this button to clear all the grids selected.

Save & Back Press this button to save the motion grid setting and return to motion setting menu.

Cancel Press this button to cancel all changes and returns to the motion setting menu.

How to select motion grid by mouse

1) Select lower-right grid.
2) Select upper-left grid.
3) The area between upper-left and lower-right grid will be selected.

How to select motion grid by front panel

1) Press Enter key to enter motion grid.
2) Use arrow keys to select one corner of desired area
3) Press Enter key at the starting point.
4) Use arrow keys to select motion area.
5) Press Enter key twice at the end point, and the area will be selected.

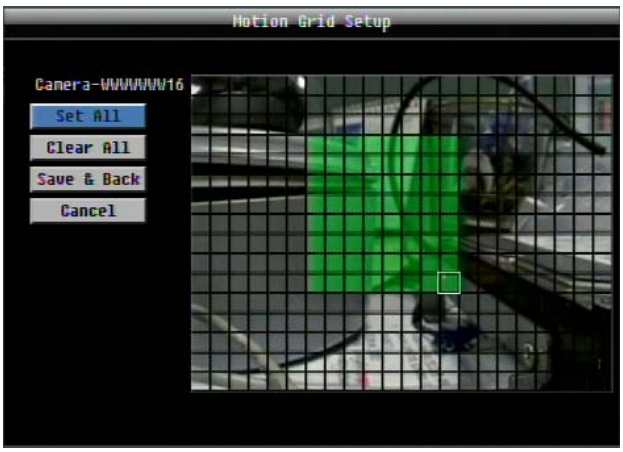


Figure 4-5 Camera Menu – Motion Grid Setting

Apply To This button can be used to copy the motion settings to other cameras. Select which cameras you wish to copy to.

"Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

4.3.4 Video Loss

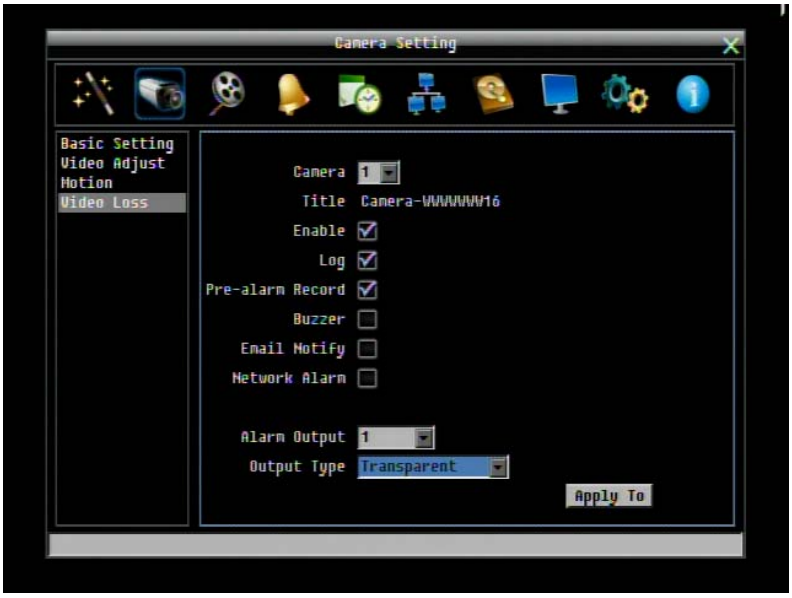


Figure 4-6 Camera Menu – Video Loss

Camera Select the camera you wish to adjust, "Title" will change to the title name of the selected camera.

Enable Check box to enable Video Loss detection.

Log Check box to record video loss events in the log.

Pre-alarm Record Check box to start copying recorded video to the hard disk from several moments before the video loss. (Pre-alarm recording rate will follow "**Normal**" frame rate setting)

Buzzer Check box to enable buzzer when a video loss event occurs.

Email Notify Check box to enable email notification when a video loss event occurs. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC when video loss occurs. (requires PowerCon software and proper settings for the Alarm Server in the Network Setup menu)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relais (in 4 channel version is only 1 relay available).

Output Type Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will remain active until user presses "**Enter**" key on front panel.

Transparent: Alarm output continues as long as there is a video loss.

Trans+Timeout: Alarm output continues until event ends, then continues for the set time duration.

Apply To This button can be used to copy the video loss settings to other cameras. Select which cameras you wish to copy to.

"Select All" selects all cameras, “Unselect All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

4.4 Record & Play Setting

Figure 4-7 is a screenshot of the **RECORD & PLAY SETTING MENU**. This menu is used to configure basic recording and playback settings.

Figure 4-7 Record & Play Menu

4.4.1 Record

Record Overwrite Check the box and disk will begin overwriting when full.

NOTE: Unless this box is checked, the DVR MUST STOP RECORDING WHEN THE DISK IS FULL. The use of record overwrite is strongly recommended. If you do not use this feature, please be sure to make specific arrangements to monitor/be notified when the disk is full.

Schedule Record Activate this check box for using scheduled recording mode.

Note: For Schedule recording, the only way to stop the DVR from recording is to turn schedule recording off. Pressing any key on the front panel to attempt to stop recording will not work during scheduling record

mode. When schedule recording is disabled, as the default the DVR will automatically begin recording when it is first turned on.

Time Stamp Select if the time and date will display while recording. Choose the location for the time display from Top, Bottom or Off.

Record Status Relay Output The ECOR264 allows monitoring the record status at a relay output

None: Relay will not react on record mode change

1 ~ 4: Select 1 relay output 1 to 4. (for 4 channel version only 1 available).
The relay is active (powered) in record mode ON, so it will also react in case of power loss.

Auto Erase Video The hard drive will automatically erase video after it has been on the hard drive for the selected number of days. To use the maximum hard drive space, choose "OFF". (See Record Overwrite and notes above.)

4.4.2 Built-in Calculator

The built-in record period calculator can give a rough estimation of the total recording time for the DVR with current settings. In order to compute as accurate an estimate as possible, please enter your estimates for the hours per day you expect recording to take place due to motion events and due to other alarm conditions.

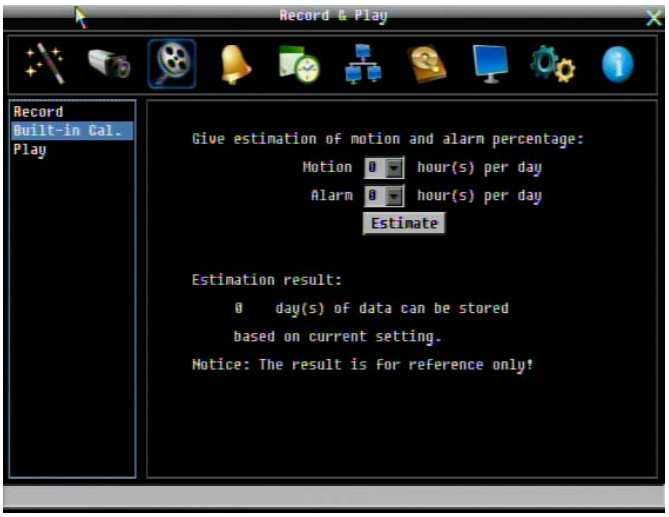


Figure 4-8 Record & Play Menu-Built-in Cal.

Motion Enter the expected number of hours per day due to motion recording.

Alarm Enter the expected number of hours per day due to alarm recording.

If the total Motion and Alarm hours is more than 24 hours, the calculator will assume that motion and alarm recording take place for the entire 24 hour period.

Click on the "**ESTIMATE**" button to display the result at the bottom of the screen:
" xx days of data can be stored based on current setting"

4.4.3 Play

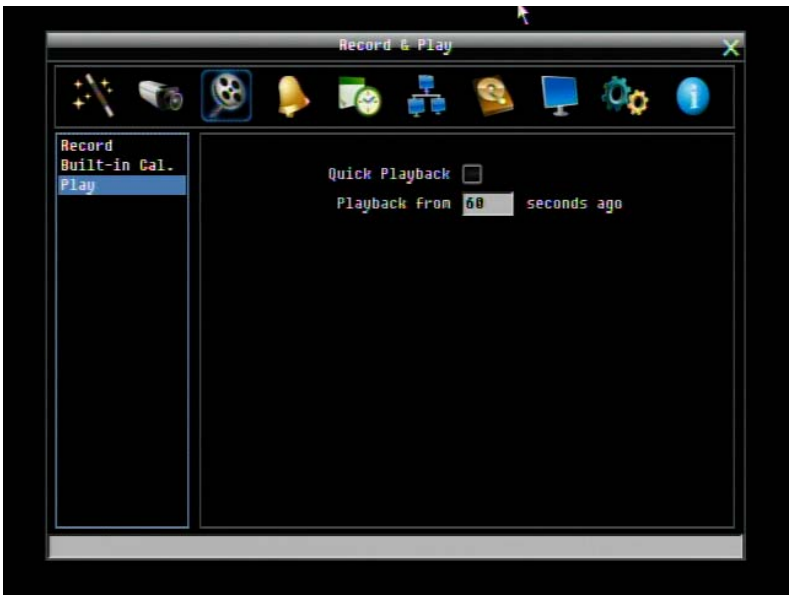


Figure 4-9 Record & Play Menu - Play

Quick Playback	Check the box to enable the quick playback function as described below.
Playback From X Seconds ago	When the DVR is put into playback (press PLAY), it will begin playing from the selected time. Choose from 60 to 3600 seconds prior to the present time.

If Quick Playback is not enabled, pressing the PLAY button will start playback from last viewed playback position.

4.5 Alarm & Event Setting

Figure 4-10 is a screenshot of the **ALARM & EVENT SETTING MENU**. This menu will walk you through alarm and event setup.

Figure 4-10 Alarm & Event Menu - Alarm

4.5.1 Alarm

Alarm Select the alarm input from 1 to 4/9/16.

Enable Check box to enable response to that alarm trigger.

Log Check box to record these alarm events in the log.

Pre-alarm Record Check box to start copying recorded video to the hard disk from several moments before the alarm event. (Pre-alarm recording rate will follow "**Normal**" frame rate setting)

Buzzer Check this box to enable the buzzer when an alarm occurs.

Main Monitor Main monitor display options when a motion occurs.

No change No change on the main monitor display.

Full screen A full screen of the active camera will display on main monitor

Call Monitor Call monitor display options when a motion occurs.

No change No change on the main monitor display.

Full screen A full screen of the active camera will display on main monitor.

Record Select which camera(s) will start recording in response to this alarm event.

Email Notify Check box to enable email notification when an alarm occurs. Email operation requires that valid email settings have been entered in the Network Setting/Email

setup screen.

Input Type This field is to change the type of alarm trigger.

N.O. Normal Open contact.

N.C. Normal Closed contact.

Network Alarm Check box to send out a network alarm to client PC when motion occurs. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Active Camera This field is for associating and alarm trigger with a specific camera. For example if you had an external motion detector near camera four you would set this option to "4". The alarm will be associated with this camera for optional full screen display, event logging, and PTZ preset activation.

PTZ Preset Select PTZ Preset from "1" to "255". If the Active Camera is a PTZ speed dome, the alarm will move the camera to the specified preset position for event recording. Click "On" to confirm selection, "Off" to cancel selection. When "ON" a sub-menu is displayed for choosing the desired PTZ preset number.

Auto Lock Check the box and the events will be recorded in the write protected segment of the Hard Disk. (DVR will lock a period of time when alarm happen, the length of time will depend on DVR setting)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action when alarm is triggered.

Timeout Alarm output lasts for the set time duration.

Permanent Alarm will remain active until user presses the **"Enter"** key or resets the alarm remotely.

Transparent Alarm output remains as long as the alarm input is active.

Trans+Timeout Alarm output continues until event ends, then continues for the set time duration.

Timeout Duration Time duration selectable from 1 to 150 seconds.

Apply To This button can be used to copy the alarm settings to other cameras. Select which cameras you wish to copy to.

"Select All" selects all cameras, "Unselect All" deselects all cameras. Click "OK" to copy the settings or "Cancel" to exit without copying.

4.5.2 Event

This section covers notifications due to internal system event warnings.

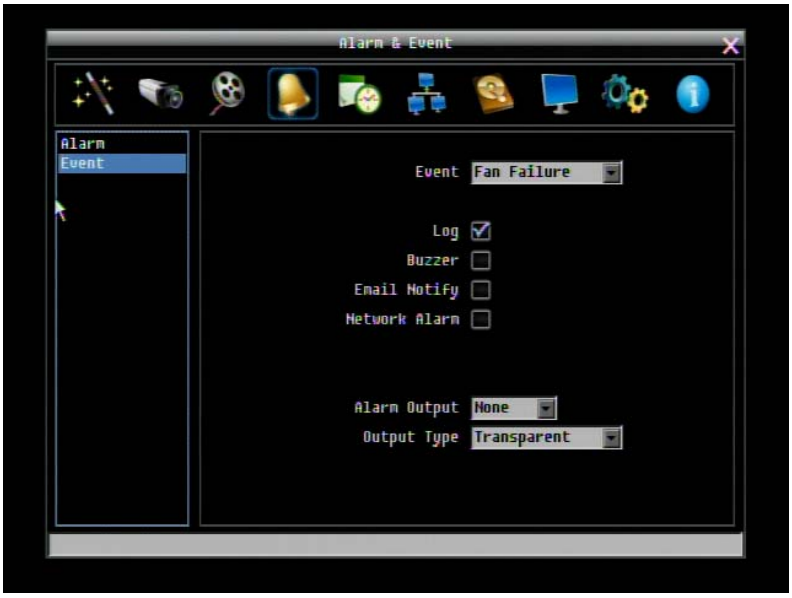


Figure 4-11 Alarm & Event Menu – Event

Event: Select from the following event types.

Fan Failure Fan is not working.

HD Temperature Hard drive is over the safety warning temperature.

HD Failure If DVR fails to detect the HDD on start up, the system will create an HD failure event.

HD Full If the DVR is not set to Overwrite in the Record Menu, an event will be created when the HDD is filled.

HD Off If HDD are switched off or are removed, the DVR will create an HD OFF event.

Power Loss If power is disconnected.

Record Stop If DVR stops recording process.

Network Loss If connection to the local network is lost, DVR will create a Network Loss event.

NOTE: This function only checks the physical connection (link) to the network. Any network behavior that blocks data connectivity (blocked ports, IP addressing errors, etc.) is not detected by this function.

Fan Failure:

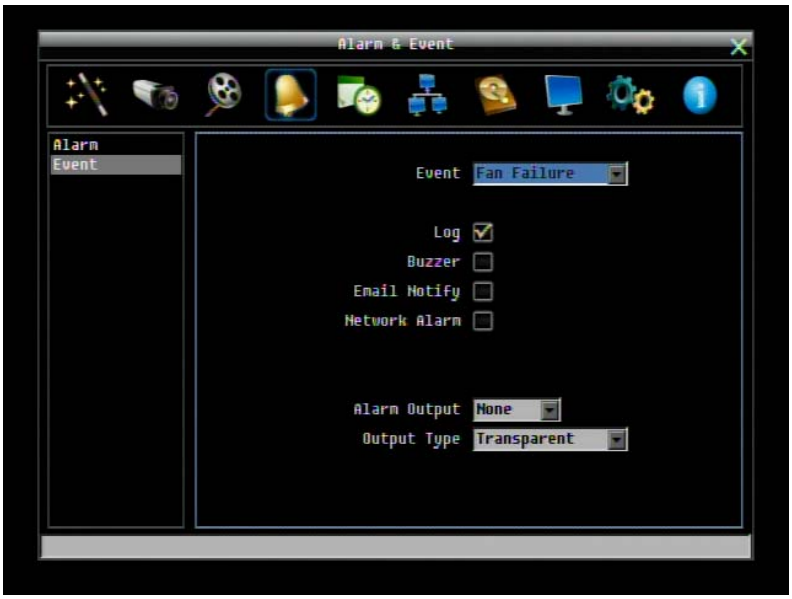


Figure 4-12 Alarm & Event Menu – Event – Fan Failure

Log	Check box to record fan failure events in the log.
Buzzer	Check box to enable buzzer when fan is not working.
Email Notify	Check box to enable email notification when fan is not working. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.
Network Alarm	Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Alarm Output	Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).
Output Type	Output action will be **Transparent** and cannot be changed (alarm output remains as long as the alarm condition is active).

HD Temperature:

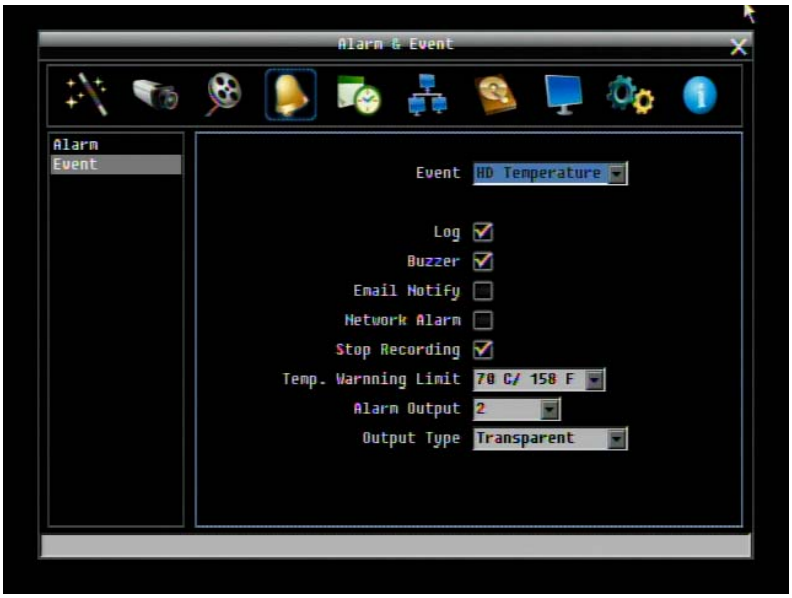


Figure 4-13 Alarm & Event Menu – Event - HD Temperature

Log	Check box to record HDD temperature events in the log.
Buzzer	Check box to enable buzzer when hard drive's temperature is over the "Temp. Warning Limit".
Email Notify	Check box to enable email notification when HDD temperature is over the "Temp. Warning Limit". Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.
Network Alarm	Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)
Stop Recording	Check box to stop recording when HD's temperature is over the "Temp. Warning Limit".
Temp. Warning Limit	Sets the trigger temperature for HD Temperature event actions. Choose between 55°C /131°F or 85°C /185°F.
Alarm Output	Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).
Output Type	Output action will be **Transparent** and cannot be changed (alarm output remains as long as the alarm condition is active).

HD Failure:

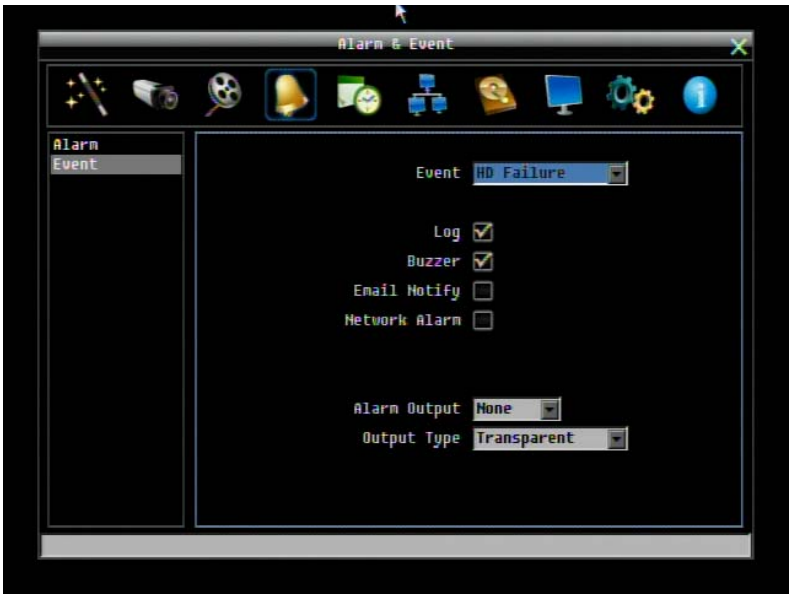


Figure 4-14 Alarm & Event Menu – Event - HD Failure

Log Check box to record events in the log.

Buzzer Check box to enable the buzzer if no hard drive is detected on system startup.

Email Notify Check box to enable email notification function when HD fails. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu).

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action will be **Transparent** and cannot be changed (alarm output remains as long as the alarm condition is active).

HD Full:

Figure 4-15 Alarm & Event Menu – Event - HD Full

Note: All settings in this menu are only relevant, if the DVR does not work in OVERWRITE mode (check box RECORD OVERWRITE off in RECORD menu, chapter 4.4.1 RECORD).

Log Check box to record events in the log.

Buzzer Check box to enable the buzzer when hard drive is full (recommended if the Record Overwrite function is disabled. See Section 5.4.1).

Email Notify Check box to enable email notification when HD is full. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will be continuously active until user presses the "**Enter**" key or resets the alarm remotely.

Transparent: Alarm output remains active until event ends.

Trans+Timeout: Alarm output continues until event ends, then continues for the set time duration.

Timeout Duration The amount of time the alarm condition continues when the HD is full. Duration selectable from 1 to 150 seconds.

HD Off:

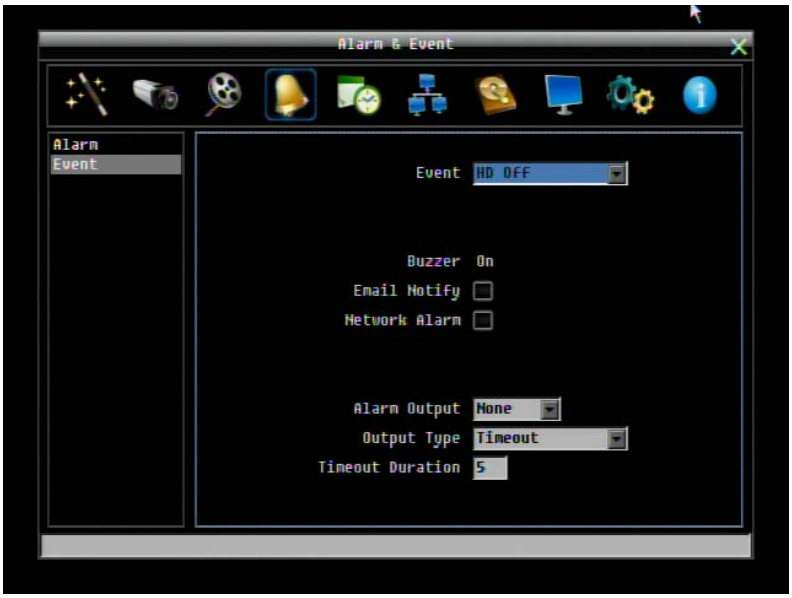


Figure 4-16 Alarm & Event Menu – Event - HD Off

Buzzer Check box to enable buzzer if the hard drive is turned off (disconnected) or becomes disabled (cannot be detected by the system).

Email Notify Check box to enable email notification when HD is off. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action when alarm is triggered.

- Timeout: Alarm output lasts for the set time duration.
- Permanent: Alarm will be continuously active until user presses "**Enter**" key.
- Transparent: Alarm output remains active until event ends.
- Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration The amount of time the buzzer sounds when the HD is off. Duration selectable from 1 to 150 seconds.

Power Loss:

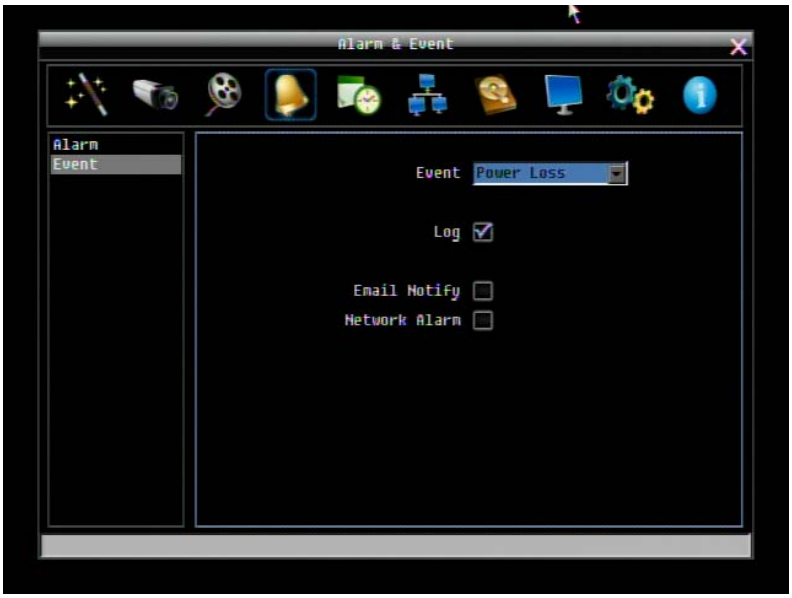


Figure 4-17 Alarm & Event Menu – Event – Power Loss

Log Log is permanently checked for this feature. Power Loss events are always recorded by the DVR.

Email Notify Check box to enable email notification when power has been restored. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC when power has been restored. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Record Stop:

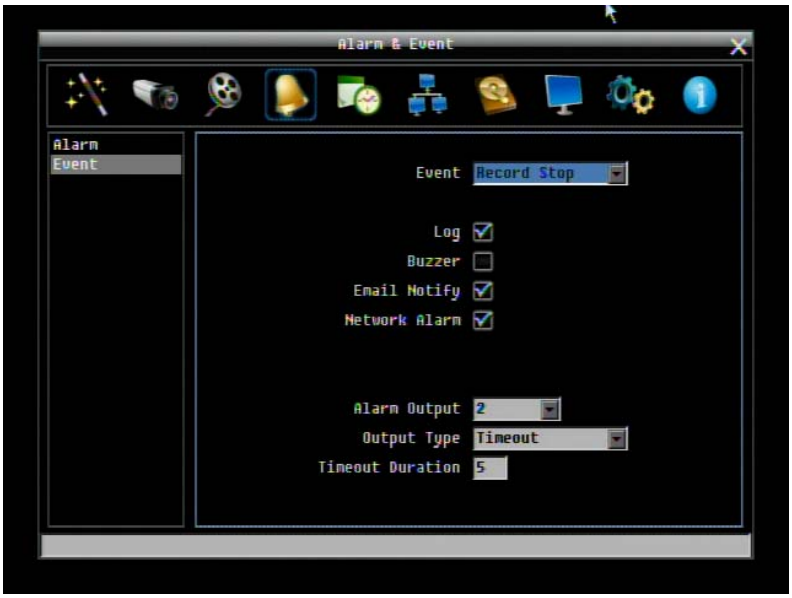


Figure 4-18 Alarm & Event Menu – Event – Record Stop

Log Check box to record events in the log.

Buzzer Check box to enable buzzer if the recording process is terminated.

Email Notify Check box to enable email notification when the recording process is terminated. Email operation requires that valid email settings have been entered in the Network Setting/Email setup screen.

Network Alarm Check box to send out a network alarm to client PC. (requires PowerCon software and setting up Alarm Server in Network Setup menu)

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Note: In this operation mode the relay is powered, if record stops. If record is stopped due to power loss, there will be no reaction.

If relay reaction is needed also in case of power loss, please use the **"RECORD STATUS RELAY OUTPUT"** in RECORD menu (chapter 4.4.1 RECORD).

Output Type Output action when alarm is triggered.

Timeout: Alarm output lasts for the set time duration.

Permanent: Alarm will be continuously active until user presses "**Enter**" key.

Transparent: Alarm output remains active until event ends.

Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration The amount of time the buzzer sounds when the recording process is terminated. Duration selectable from 1 to 150 seconds.

Network Loss:

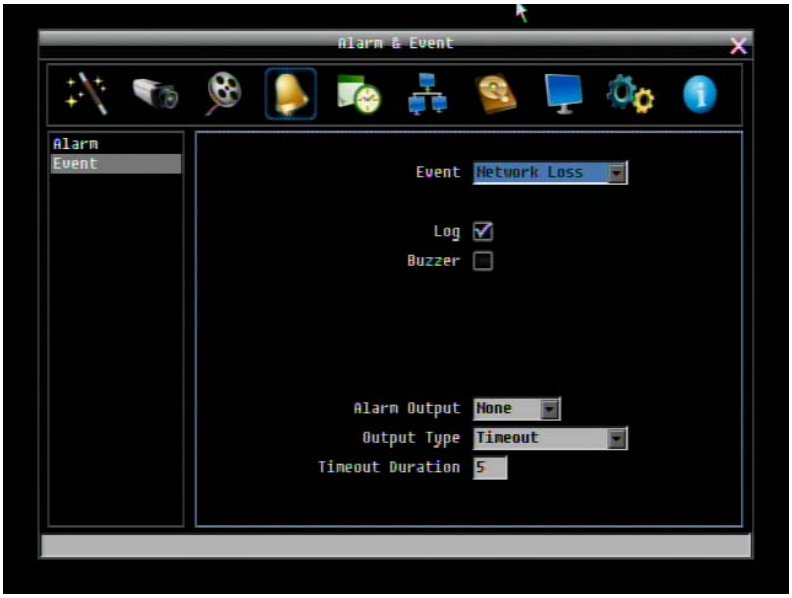


Figure 4-19 Alarm & Event Menu – Event – Network Loss

Log Check box to record events in the log.

Buzzer Check box to enable buzzer when network is lost.

Alarm Output Selection of relay output as event reaction "**NONE**" (not active), "**1**" ~ "**4**" for the relay (in 4 channel version is only 1 relay available).

Output Type Output action when alarm is triggered.

- Timeout: Alarm output lasts for the set time duration.
- Permanent: Alarm will be continuously active until user presses "**Enter**" key.
- Transparent: Alarm output remains active until event ends.
- Trans+Timeout: Alarm output continues until event ends, then lasts for the set time duration.

Timeout Duration The amount of time the buzzer sounds when DVR stops recording. Duration selectable from 1 to 150 seconds.

NOTE: This function only checks the physical connection (link) to the network. Any network behavior that blocks data connectivity (blocked ports, IP addressing errors, etc.) is not detected by this function.

4.6 Schedule Setting

Figure 4-20 is a screenshot of the **SCHEDULE SETTING MENU**. In this menu you can set a unique timer to enable recording during a specified time period. This menu is used to configure Express Setup, Holidays and detailed Schedule settings.

ATTENTION: All defined settings in this menu are only active, if the check box "**SCHEDULE RECORD**" in RECORD menu (chapter 4.41 "RECORD") is activated !

Figure 4-20 Schedule Menu-Express Setup

4.6.1 Express Setup

Weekend Start Select day and time when weekend starts.

Weekend End Select day and time when weekend ends.

Daytime Start Select weekday daytime starting time. (Nighttime schedule ends when Daytime begins)

Daytime End Select weekday daytime ending time. (Nighttime schedule begins when Daytime ends)

Record Type Select the type of recording for each time period.

Disabled No recording during scheduled time period

Normal+Event Continuous and Event recording

Event Only Event recording only

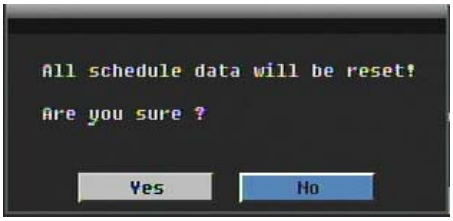
Normal Frame Rate Continuous FPS recording rate for the scheduled time period. The maximum rate is limited to the DVR's maximum recording rate divided by the number of active cameras. Selectable frame rates include 30fps, 15fps, 10fps, 7.5fps, 5fps, 1fps or 0fps (0fps means no continuous recording).

Event Frame Rate FPS recording rate for events. Selectable frame rate includes 30fps, 15fps, 10fps, 7.5fps, 5fps, 1fps or 0fps. (0fps means no event recording).

Event Action Check this box to enable Buzzer, Alarm out, E-mail and Network actions selected

elsewhere when an event occurs during the selected time period.

Apply Press “Apply” button bring up a confirmation window.



Select “Yes” to confirm and apply the express schedule settings or “No” to cancel changes.

4.6.2 Holidays

In addition to setting a weekly record schedule, user can also schedule a specific recording configuration for specific days of the year.

Figure 4-21 Schedule Menu-Holidays

Date Type Select one of the 2 day types, HOLIDAY or OTHERS.

Recurrent Type Select one of the options for entering the date:

One time: Input of a single date, not repeated in following years

Month/Date: Input of month and date, this Holiday will be repeated in following years

Month/Weekday: Input of month and day of the week, this Holiday will be repeated in following years

Details Input of the date depending on the RECURRENT TYPE mode.

Prev / Next Browse page forward / backward (3 pages total).

Apply Click on APPLY will take over the Holiday settings.

4.6.3 Schedule

Controls camera recording mode by time of day on specific days of the week and/or holidays and 'other' days.

Note: All schedule settings are active only, if the check box "SCHEDULE RECORD" in RECORD menu is activated !

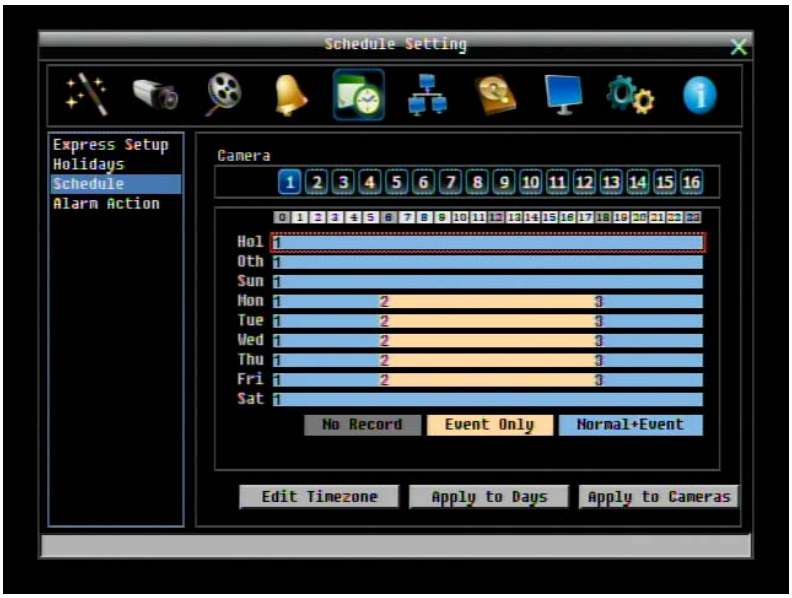


Figure 4-22 Schedule Menu-Schedule

Camera Select a camera number to change the schedule for that camera.

Each camera can be controlled during a 24 hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Time Bar The time bar uses three different colors to distinguish each recoding mode.

Gray (No Rec) No recording during this time block.

Orange (E) Only events are recorded during this time block.

Blue (N+E) (Default) Normal and event recording during this time block.

To Set Schedule using Mouse

1. Click on desired start time block (no numbers on it) on a time bar. At this time, the selected block will be highlighted in blue frame and the selected time bar will be highlighted by red frame.

   There are 24 blocks on the time bar representing 24 hours respectively. Set a schedule start time by clicking on a desired start time block on a time bar and clicking again to confirm it. At this time, the selected block and all following blocks will turn gray, which means this gray timezone has been set to the recording mode of gray (No Rec).

2. Click again to confirm, then a new sequence number (for the new section) will show on this block and current and all following blocks will turn to gray. This means this new gray timezone has a new record mode (No record).

   Change the section to different mode (with different color) by clicking on the first (numbered) block of each section. The color switches from gray -> orange -> blue, every time user clicks the first block of a section.

3. Repeat clicking on the first block (indicated by a sequence number on it) of any timezone, this timezone will change from one color to another, which means switching the record mode. The color switch sequence is gray->orange->blue.

Schedule Setting from front panel

1. **Enter schedule setting mode**: press "Enter" button to enter schedule setting mode. At this time, the whole editing area at right-down side will be highlighted within a blue frame. See below image.

2. **Enter camera selection mode**: Use Up/Down arrow key to switch to Camera selection mode. When Camera selection mode is selected, all cameras will be highlighted in a blue frame. See below image.

3. **Selecting camera**: Use Right/Left arrow key to select desired camera to configure. Selected camera number will be highlighted by a blue frame. See above image.

4. **Enter time bar editing mode**: Use Up/Down arrow key to switch to **time bar editing mode**. When this mode is selected, all 9 time bars will be highlighted within a blue frame.

5. **Select desired time bar for setting**: press Enter button, the first time bar will be selected for setting and highlighted in a red frame. See below image. Use Up/Down arrow key to desired time bar for setting.

6. **Editing blocks in a time bar**: when a time bar is selected (highlighted in red frame), press Enter button, then the first block of this bar will be selected (highlighted in blue frame). Use Right/Left arrow key to switch to desired block as starting time, and press Enter button again to confirm. At this time, the current and all following blocks will turn into gray, which means this gray timezone has been set to the recording mode of gray(No Rec). User can also change the timezone to a different record mode (with different color) by following instruction in next step.

7. **Changing recording mode (color) of a timezone**: Use Right/Left arrow key to switch to the first block (with number on it) of a timezone. Clicking Enter button, and this timezone will switch to another color, which means switching to another record mode. The color switch sequence is gray->orange->blue.

Click the "**Edit Timezone**" button to edit the recording parameters for a time zone.

Schedule Setting
Editing: Holidays
From To Record Resolution Normal Event Action
1. 00:00 01:00 Normal+Event 704x480 5 fps 10 fps
2. 01:00 24:00 Event Only 352x240 1 fps 30 fps
Apply
Close
Edit Timezone
Apply to Days
Apply to Cameras

Figure 4-23 Schedule Menu-Schedule-Edit Timezone

Editing Timezone:

From Displays time zone start time

To Displays time zone end time

Record Displays Record mode

Resolution Select recording resolution.

NTSC 704x480; 704x240; 360x240

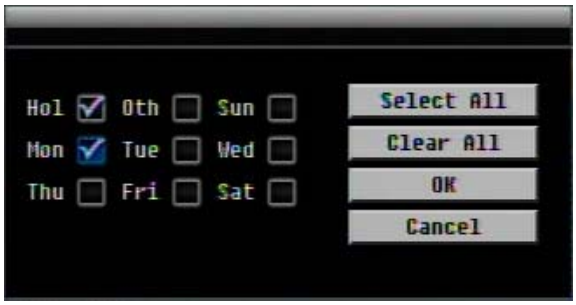
PAL 704x576 / 704x288 / 360x288

Normal Frame rate in images per second for continuous recording. The speed is limited to the maximum recording rate of the DVR divided by the number of installed cameras.

Event Frame rate in images per second for event recording. Event record speed can be set from 1 to 30 (25 for PAL). The sum of the normal and event record fps during event recording cannot exceed the maximum record rate of the DVR.

Action Check this box to enable notifications, enabled elsewhere, Buzzer, Alarm out, E-mail, and Network when an event occurs.

Apply to Days This button can be used to copy schedules to other days.



Select which days you wish to copy to. "Select All" selects all days, "Clear All" deselects all days. Click "OK" to copy the settings or "Cancel" to exit without copying.

Apply to Cameras

This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to.

"Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

ATTENTION: All defined settings in this menu are only active, if the check box "**SCHEDULE RECORD**" in RECORD menu (chapter 4.41 "RECORD"is activated !

4.6.4 Alarm Action

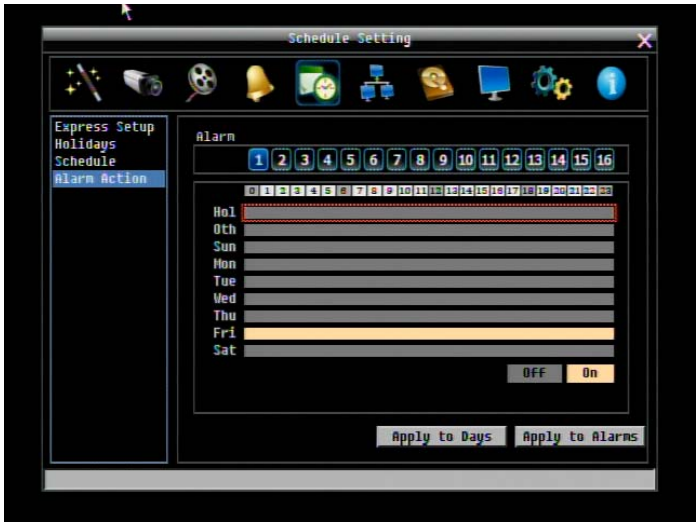


Figure 4-24 Schedule Menu-Alarm Action

Defines recording response to input trigger signals by time of day on specific days of the week and/or holidays and 'other' days.

Alarm: Select a number to change the schedule for that alarm. Each alarm can be set on a 24 hour time block for Holiday (Hol), Other (Oth), Sunday (Sun), Monday (Mon), Tuesday (Tue), Wednesday (Wed), Thursday (Thu), Friday (Fri), or Saturday (Sat).

Time Bar: The time bar uses two different colors to distinguish each recoding mode.

Off: No recording during this time block.

On: Alarm action will be recorded during this time block.

To Set Schedule using Mouse

1. Click on desired start time block (no numbers on it) on a time bar. At this time, the selected block will be highlighted in blue frame and the selected time bar will be highlighted by red frame.

   There are 24 blocks on the time bar representing 24 hours respectively. Set a schedule start time by clicking on a desired start time block on a time bar and clicking again to confirm it. At this time, the selected block and all following blocks will turn gray, which means this gray timezone has been set to the recording mode of gray (alarm action recording off).

2. Click again to confirm, then a new number (for the new section) will show on this block and current and all following blocks will turn to gray. This means this new gray timezone has a new record mode (alarm action recording off).

   Change the section to different mode (with different color) by clicking on the first block of each section. The color switches from gray -> orange, every time user clicks the first block of a section.

3. Repeat clicking on the first block (with number on it) of any timezone, this timezone will change from one color to another, which means switching the record mode. The color switch sequence is gray->orange.

Alarm Action Setting from front panel

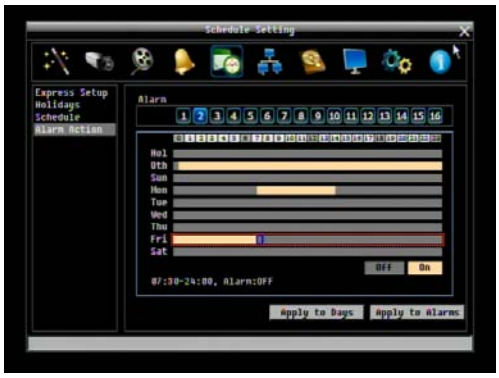
1. **Enter Alarm Action setting mode**: press "Enter" button to enter Alarm Action setting mode. At this time, the whole editing area at lower-right side will be highlighted within a gray frame. See below image.

2. **Enter alarm selection mode**: Use Up/Down arrow key to switch to Alarm selection mode.

3. **Selecting alarm**: Use Right/Left arrow key to select an alarm to configure. Selected alarm number will be highlighted by a blue frame. See above image.
4. **Enter time bar editing mode**: Use Up/Down arrow key to switch to **time bar editing mode**. When this mode is selected, all 9 time bars will be highlighted within a blue frame.
5. **Select desired time bar for setting**: press Enter button, the first time bar will be selected for setting and highlighted in a red frame. See below image. Use Up/Down arrow key to desired time bar for setting.

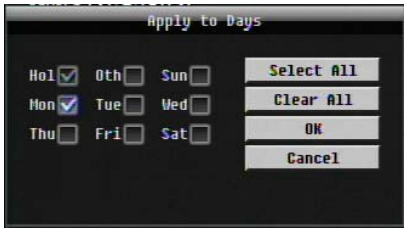
6. **Editing blocks in a time bar**: when a time bar is selected (highlighted in red frame), press Enter button, then the first block of this bar will be selected (highlighted in blue frame). Use Right/Left arrow key to switch to desired block as starting time, and press Enter button again to confirm. At

this time, the current and all following blocks will turn into gray, which means this gray timezone has been set to the recording mode of gray (Alarm Action off). User can also change the timezone to a different record mode by following instruction in next step.



7. **Changing recording mode (color) of a timezone**: Use Right/Left arrow key to switch to the first block (with number on it) of a timezone. Clicking Enter button, and this timezone will switch to another color, which means switching to another recording mode. The color switch sequence is gray->orange.

Apply to Days: This button can be used to copy schedules to other days. Select which days you wish to copy to. "Select All" selects all days, “Clear All” deselects all days. Click “OK” to copy the settings or "Cancel" to exit without copying.



Apply to Cameras: This button can be used to copy schedules to other cameras. Select which cameras you wish to copy to. "Select All" selects all cameras, “Clear All” deselects all cameras. Click “OK” to copy the settings or "Cancel" to exit without copying.

ATTENTION: All defined settings in this menu are only active, if the check box "**SCHEDULE RECORD**" in RECORD menu (chapter 4.41 "RECORD"is activated !

4.7 Network Setting

Figure 4-25 is a screenshot of the **NETWORK SETTING MENU**. This menu is for configuring the DVR for a network connection.

Figure 4-25 Network Menu – LAN

4.7.1 4.6.1 LAN

Network Type:

Static IP User can set a fixed IP for network connection.

DHCP DHCP server in LAN will automatically assign IP for network connection

PPPoE For direct connection to DSL ONLY. Verify with your ISP if they use PPPoE.

IP: This field shows the DVR's current IP Address. A static IP address must be set manually. If DHCP or PPPoE is selected, this value will be assigned automatically.

Subnet Mask: This field shows the subnet mask for your network so the DVR will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

Gateway: This field shows the gateway for your network so the DVR will be recognized within the network. If DHCP or PPPoE is selected, this value will be assigned automatically.

DNS Server 1: This field shows the primary DNS server for your network. If DHCP is selected and an internet connection is available, this value will be assigned automatically. This field must have a valid DNS address in order to use the DDNS feature (see Sections 4.6.3 and 7 DDNS for more detail).

DNS Server 2: This field shows the secondary DNS server for your network.

HTTP Port: Port number for HTTP/WEB communication.

Additional information:

1. Set up the DVR Network Menu according to the instructions detailed in the Networking chapter of this DVR's manual.

   a. If using DHCP, all settings will be detected automatically. While DHCP is a useful tool for determining the network settings, if you set up your DVR in this manner *its IP address may change at different times for different reasons*, particularly after a power failure. *If the IP address of the DVR changes, you may have difficulties accessing your DVR* locally and/or remotely. **It is strongly recommended that you assign a fixed (static) IP address to your DVR**, and that in order to avoid address conflicts the IP address assigned be outside of the DHCP range of addresses your router issues to DHCP clients. Please do not set the DHCP address issued to the DVR by the router as its static IP address unless you take specific steps that program your router to prevent such address conflicts.

   b. If using a Fixed IP (**recommended**), you will need to input the information manually. In order for DDNS to work, you must enter valid data, compatible with your network, for all four of the network setting fields: IP address, subnet mask, default gateway and the DNS Address (depending on your network hardware and configuration this may be the IP address of your router/gateway, or it may be the actual IP address of the local DNS server).
   The DNS server IP is required because your DNS server provides critical information necessary for the DVR to communicate with the DDNS server.

   You can obtain the actual DNS IP from your Internet Service Provider (ISP); or, from a PC located on the same LAN as the DVR, go to http://www.dnsserverlist.org/ to obtain a list of the IP addresses of their recommendation of the best servers to use for your location.

2. If you are connecting through a router, make sure that you have 'opened up' all the required network ports in the *port forwarding* section of your router's setup options. That is, you have directed the router to send any incoming traffic using those IP ports to the LAN IP address of the DVR. Useful information about router port forwarding can be found at www.portforward.com . Different routers may use different terms for port forwarding function. For instance, D-Link calls it *virtual server*, Netopia calls it *pinholes*.

   Note: The default port for the ECOR264x1 is: 80

Note: Port 80 is the default port used for web browsing. Because of this, in order to prevent the average user from hosting a web server, ***most ISPs BLOCK traffic using port 80*** from reaching the average site. If you only plan to view your DVR on a LAN, you can use port 80, and don't have to concern yourself with DDNS or routers. However, if you desire remote access to your DVR, perhaps using DDNS (optional), you MUST select functional ports and set up the port forwarding in your router. Other ports, such as 8080 and 8000 are sometimes blocked by ISPs as well.

What port(s) should be used? There are 65,535 valid IP ports to choose from. These are broken down into three groups:

- Well Known Ports 0 thru 1023
- Registered Ports 1024 thru 49151
- Dynamic and/or Private Ports 49152 thru 65535

So, rather than encounter a port conflict by choosing a port commonly used for another purpose (like port 25 for SMTP mail or port 448 for secure sockets), choose an 'unusual' port number. For example, add 50,000 to your house number: 50,123 is unlikely to lead to a port conflict. For a list of the known and registered ports, see http://www.iana.org/assignments/port-numbers

Bandwidth Limit: Specify, disabled / 128 K/ 256 K / 512 K / 768K/ 1M / 3M bps. The maximum bandwidth that the DVR is allowed to use on the network. This is a useful function when connecting the DVR to busy or heavily loaded networks, or when accessing the DVR(s) over a WAN.

Enable Mobile Viewing: Check this box for activating live stream access by mobile phone. Please consult *Appendix D: "Mobile Phone Viewing*" for details.

4.7.2 EMAIL

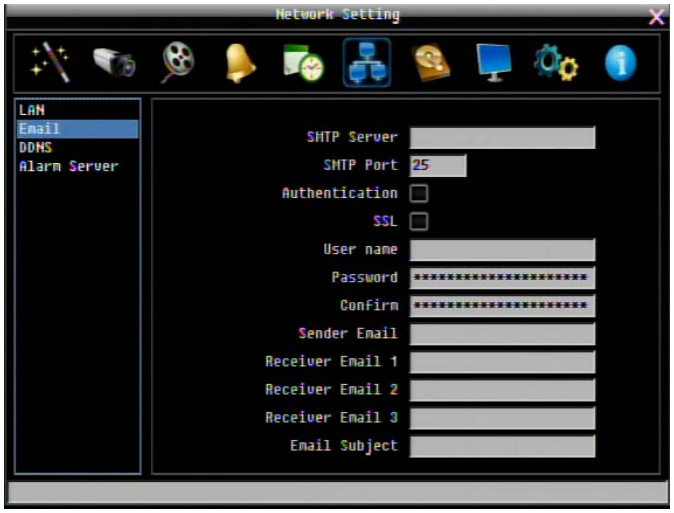


Figure 4-26 Network Menu – Email

SMTP Server Assign the SMTP (e-mail) server's name.

Note: For more reliable email service, use the server's IP address.

SMTP Port Assign the port number used by the SMTP server.

Authentification Activate the check box, if the SMTP server requires an authentication (user name / password).

SSL Activate the check box, if the SMTP server supports SSL (Secure Sockets Layer) transmission.

User Name If authentification is required, enter user name here.

Password If authentification is required, enter password here.

Sender Email Enter sender's e-mail address.
Note: Make sure to enter a valid Email address here. Otherwise most of the mail server will block the Emails!

Receiver Email 1..3 Enter up to 3 Email addresses for receiving event notifications.

Email Subject Enter email subject.

4.7.3 DDNS

DDNS Service: Select either “EverfocusDDNS” or “www.dyndns.org” as the DDNS provider. If DDNS will not be used, simply select “Disable”.

EverfocusDDNS

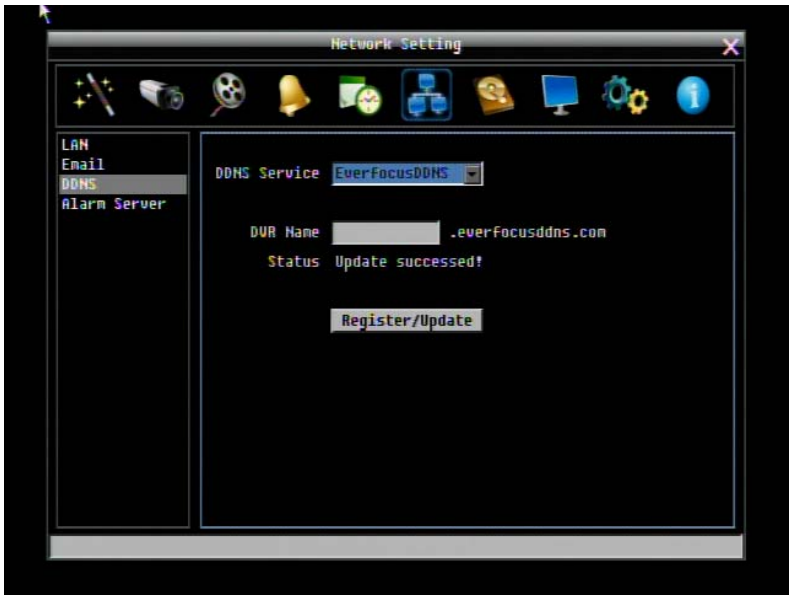


Figure 4-27 Network Menu – DDNS-EverfocusDDNS

DVR Name: Input the desired name for the DVR

Register/Update: Click the button to submit and register the name to the Everfocus server.

The DDNS name you choose must be unique; that is, it must not already be in use. Please go to the website http://everfocusddns.com and check that the name you wish to use is available.

NOTE: The name of the DVR **cannot include a space, or a dot** (period) or **any special characters** particularly **~ ! @ # $ % ^ & * ( ) + < > " ; : . , _**

In the DVR’s Network Menu above, go to DDNS. Choose “everfocusddns.com” for the Server and put in your chosen name (verified available and without special characters) for DVR Name/hostname.

Press the Select or Submit/Update button to synchronize the DVR with the DDNS server. You should see an indication of “Success” on the screen. If you see “Could Not Find Server” or any other error message instead, double-check your network settings and DDNS name and resubmit the DDNS name until you get “Success”. You should now be able to connect by typing in the host name you created.

Example: http://hostname.everfocusddns.com

It is not necessary to append the HTTP port number to the DDNS name. The EverFocus DDNS server not only keeps track of your DVR’s IP address, it keeps track of the ports too!

www.dyndns.org

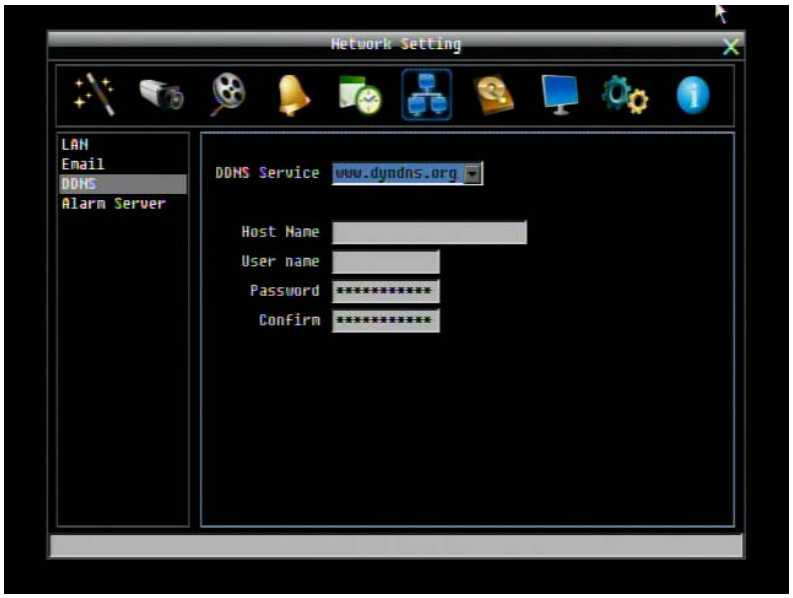


Figure 4-28 Network Menu – DDNS- www.dyndns.org

Host name Host name created through the dyndns account.

User name User name of the dyndns account.

Password Password of the dyndns account.

Confirm Re-enter password.

Note: For more details on DDNS setup, please see “Chapter 7 - Everfocus DDNS Setup”.

4.7.4 Alarm Server

The ECOR264 can send network alarm notification to PowerCon software and other central management systems, which support this function.

The notification can be transmitted to max. 3 receiving servers.

Figure 4-29 Network Menu – Alarm Server

Server IP 1...3 Enter the IP - addresses of the receiving alarm servers

Protocol Type Select the protocol type:
UDP: User Datagram Protocol
TCP: Transmission Control Protocol

Note: Use UDP only for LAN applications, this mode is not safe for Internet connections.

Port Transmission port for network alarm messages

Network ID Enter the network ID (Unique ID) for network alarm.

Note: 1. The ID must contain 10 numbers.
2. Only numbers are valid characters
3. Do not use leading zeros.

4.8 Disk Information

4-30 is a screenshot of the **DISK INFORMATION MENU**. This menu is used to review the DVR's hard drive settings and status. No values in this screen can be changed by the operator.

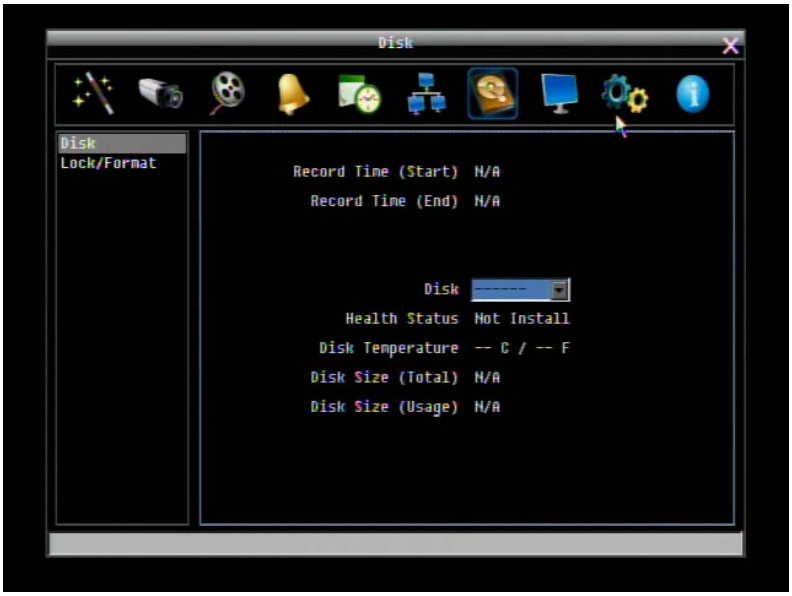


Figure 4-30 Disk Menu-Disk

4.8.1 Disk

Record Time (Start) Shows earliest recorded time on the hard drive.

Record Time (End) Shows latest or most current recorded time on the hard drive.

Disk Select disk number.

Health Status Displays current status of the selected disk.

Disk Temperature Displays current disk temperature.

Disk Size/Total Shows total disk size.

Disk Size/Usage Shows percentage of used disk space. If DVR is set to automatically overwrite the disk, this option will show "Overwrite mode currently".

4.8.2 Lock

4-31 is a screenshot of the **DISK INFORMATION MENU**. This menu is used to review the DVR's hard drive settings and status. No values in this screen can be changed by the operator.

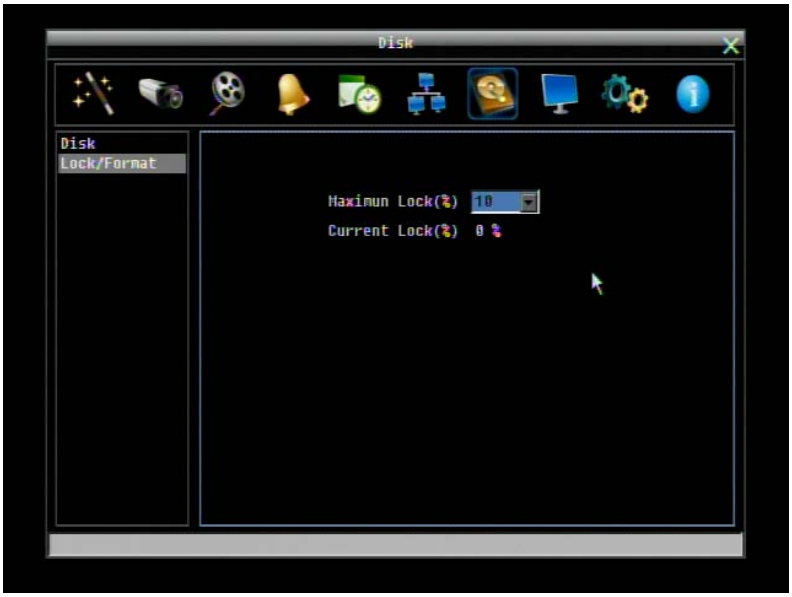


Figure 4-31 Disk Menu-Lock/Format

Maximum Lock (%) User can set the maximum lock percentage of the HDD volume. After setting lock percentage, protected records can be enabled/disabled by different methods:

1) "Camera > Basic Setting > Motion > Auto Lock"

2) "Alarm & Event > Alarm > Auto Lock".

3) Lock or unlock the file manually in search result list

Current Lock (%) Current lock percentage of HDD volume. If locked data has reached the maximum lock percentage, it will stop lock new data.

Unlock All Click this button to unlock the locked part of HDD.

Delete All Click this button to delete all the unlocked data in HDD.

Format Click this button to format the whole HDD.

4.9 Display Setting

Figure 4-32 is a screenshot of the **DISPLAY SETTING MENU**. This menu will walk you through the Main Monitor On-Screen Display (OSD) and Main Monitor Sequential setup.

Figure 4-32 Display Menu – Monitor OSD

4.9.1 Monitor OSD

Display options for the Main and Call Monitor.

Main Monitor

Camera Title	Check the box to display camera titles.
Date/Time	Check the box to display current date/time.
Playback Date/Time	Check the box to display playback date/time.
Playback Status	Check the box to display playback status.
Event Status	Check the box to display event status.
HDD Status	Check the box to display hard drive status.
Text Insert	Reserved function (display data transmitted from external RS232 device.)
Monitor Output Select	Function reserved

Call Monitor

Camera Title	Check the box to display camera titles.
Date/Time	Check the box to display current date/time.

4.9.2 Main M/T SEQ

Figure 4-33 Display Menu – Main M/T SEQ

Step Sequence order. For reference.
Camera Select which camera appears in the current step.
Dwell (sec) Set the dwell time for each step. Sequence dwell time can be set from 0 to 99 seconds. Sequence repeats continuously from steps 1 through 20 until interrupted.

4.9.3 Call M/T SEQ

Figure 4-34 Display Menu – Main M/T SEQ

Step Sequence order. For reference.

Camera Select which camera appears in the current step.

Dwell (sec) Set the dwell time for each step. Sequence dwell time can be set from 0 to 99 seconds. Sequence repeats continuously from steps 1 through 20 until interrupted.

4.10System Setting

Figure 4-35 is a screenshot of the **SYSTEM SETTING MENU**. This menu is for setting up general system parameters for the DVR.

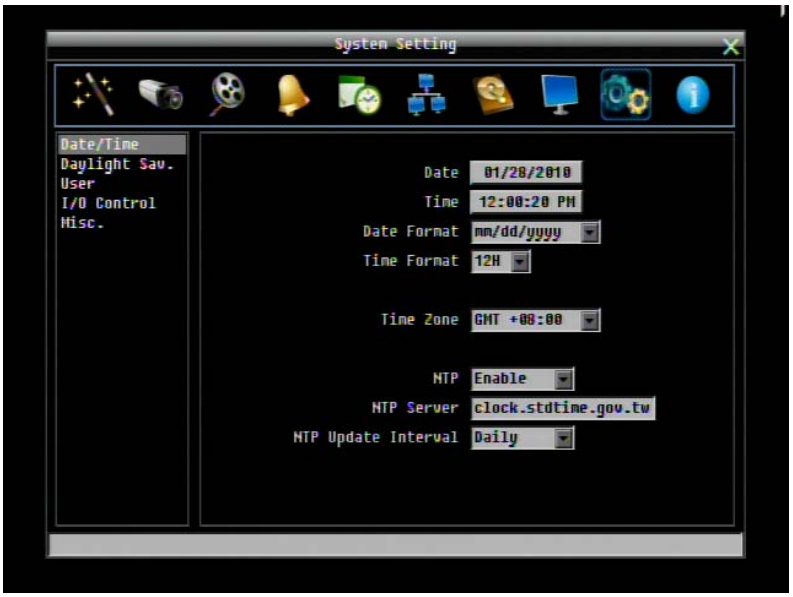


Figure 4-35 System Menu – Date/Time

4.10.1 Date/Time

Date	Set current Date.
Time	Set current Time.
Date Format	Choose date format from yyyy/mm/dd, dd/mm/yyyy, and mm/dd/yyyy.
Time Format	Select time format 12H or 24H.
Time Zone	Select the time zone of current location.
NTP	Enable / disable automatic time synchronisation by NTP server.
NTP Server	Enter IP-Address of a valid NTP server. To find a compatible NTP address, please follow these steps: a) Go to a PC that is connected to the internet. b) Click on “START” -> “RUN” -> type “command” and press “OK”. c) In the DOS Prompt, type “ping pool.ntp.org” to find out the IP address of an NTP Server.
NTP Update Interval	Define the update interval for NTP time synchronisation (daily, weekly or monthly)

4.10.2 Daylight Saving

Figure 4-36 System Menu – Daylight Saving

Daylight Saving	Activated check box enables automatic Daylight Saving switching.
Start Date	Start date of Daylight Saving period.
Start Time (hh:mm)	Enter time when daylight saving period begins.
Set To (hh:mm)	Enter the new time for begin of Daylight Saving period. For most regions, this will be one hour ahead of the “Start Time”.
End Date	End date of daylight saving time.
End Time (hh:mm)	Enter the time when daylight saving time ends.

4.10.3 User

User Menu is where you can add or delete different login IDs on the system as well as set access levels. See the chart on next Page for a listing of the rights associated with each access level.

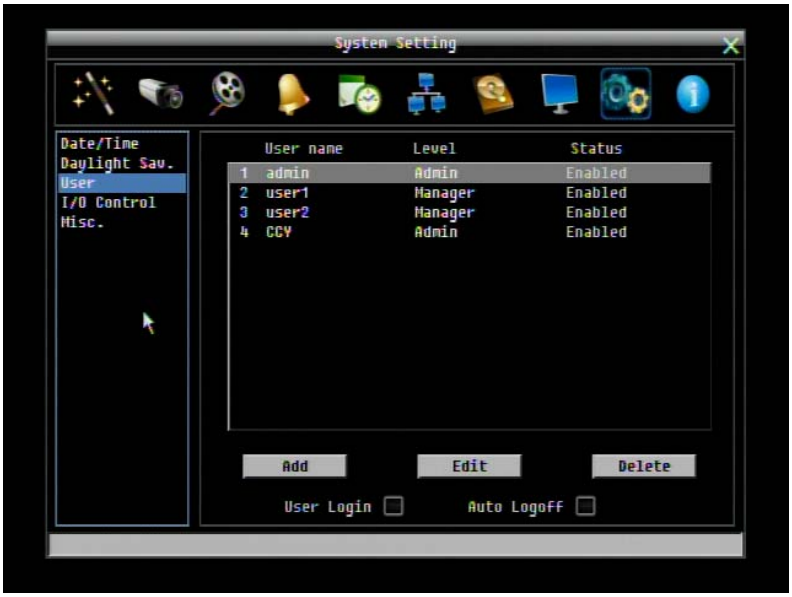


Figure 4-37 System Menu – User

The default settings provide 3 users with different user rights:

User Name	Password	User Right Level
admin	11111111	Admin
user1	22222222	Manager
user2	33333333	Operator

Add

Click “Add” button to add a new user. Set the name (case-sensitive), password, access level and status. Press “Add” button to confirm a new user or “Cancel” to exit without making changes.

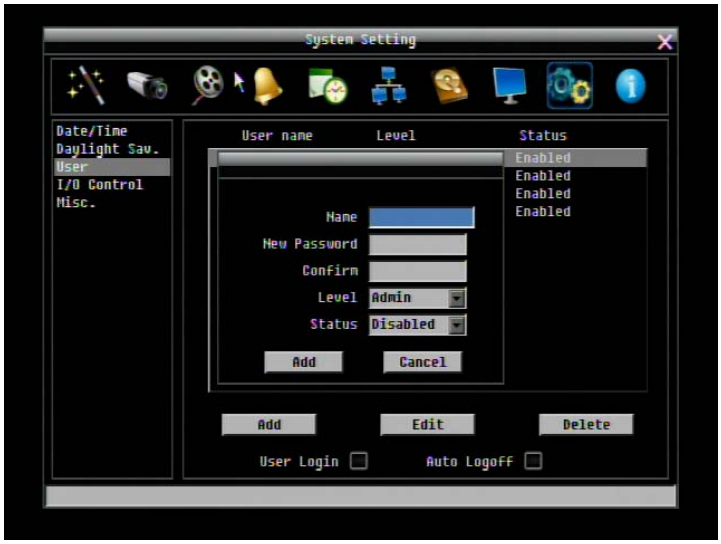


Figure 4-38 System Menu – User - Add

Edit

Click “Edit” button to make changes to an existing user account. Press “Save” button to save changes or “Cancel” to exit without making changes.

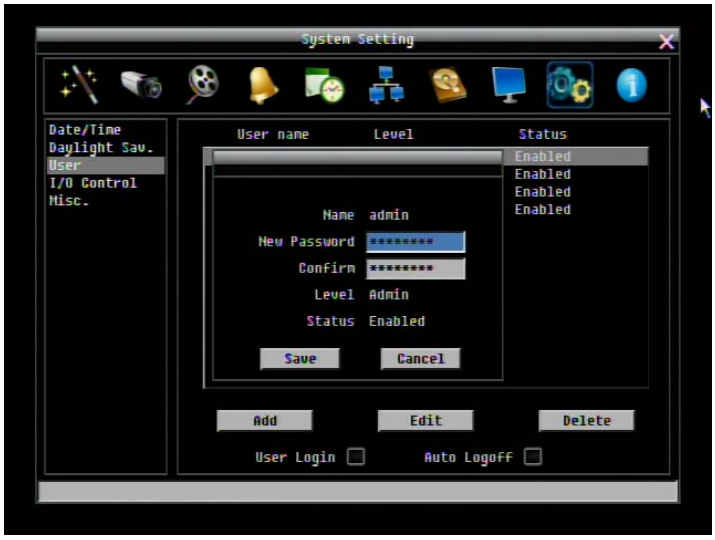


Figure 4-39 System Menu – User - Edit

User Login Check this box to activate user login. When this is disabled, no username or password is required to access the system, and all users operate with ADMIN rights.

Auto Logoff Check this box to automatically logoff the current user after 3 minutes of inactivity.

There are three system access levels. The following table show the rights of each level.

User Rights	Operator	Manager	Administrator
Network Operation			
Live Views	✓	✓	✓
PTZ	○	✓	✓
View covert cameras	○	✓	✓
Playback / Search	○	✓	✓
Copy / Export	○	✓	✓
Info - Menu	✓	✓	✓
View Log	○	○	✓
Delete Log	○	○	✓
Setup Menu	○	○	✓
Edit own user name / password	✓	✓	✓
Local Operation			
Live Views	✓	✓	✓
Display OSD ON/OFF	✓	✓	✓
OSD Settings	○	✓	✓
Sequence	✓	✓	✓
PTZ	○	✓	✓
View covert cameras	○	✓	✓
Playback / Search	○	✓	✓
Info - Menu	✓	✓	✓
View Log	○	○	✓
Delete Log	○	○	✓
Setup Menu	○	○	✓
Edit own user name / password	✓	✓	✓

4.10.4 I/O Control

Figure 4-40 is a screenshot of the I/O Control Setting Menu. This menu is used to define the settings for controlling the DVR through RS485, and for DVR control of attached PTZ cameras.

Figure 4-40 System Menu – I/O Control

RS232

Baud Rate Transmission speed of the RS-232 port of on the DVR. There are eight different speeds: 1200 BPS, 2400 BPS, 4800 BPS, 9600 BPS, 19200 BPS, 38400 BPS, 57600 BPS and 115200 BPS.

Data Bit This field is the data bit at which you will be transferring. There are two settings for this option:

8 or 7 bit

Stop Bit This field is to set the stop bit for the RS232 connection. There are two different stop bits, 1 or 2 bit

Parity This field is to select the parity level at which you will be connected. You can choose between None, Odd, or Even parity levels.

RS485

PTZ Protocol PTZ protocol for connected PTZ camera, select protocol type EverFocus, Pelco-D, Pelco-P, Samsung (Electron.) or Transparent.
In Transparent mode the protocol type is defined in the central management software, this mode works only for network control.

485 ID Enter RS-485 ID (address) of the ERS-4 in the range 1 ~ 127, required for RS-485 remote control by EKB500
Default: 1

Baud Rate Transmission speed of RS-485 interface, select 1200, 2400, 4800, 9600, 19200, 38400, 57600 or 115200 BPS

Default: 9600

Data Bit Data bit used for transmission, select 7 or 8
Default: 8

Stop Bit Stop bit used for transmission, select 1 or 2
Default: 1

Parity Parity setting for RS-485 transmission, select NONE, ODD or EVEN
Default: NONE

CONTROL

IR Remote ID Receiver ID for IR - remote control. Select 1~4.

One remote control can be used to operate up to 4 DVRs. The DVR to be addressed is selected by pressing the key corresponding to its ID number on the remote control.

4.10.5 Misc.

Figure 4-41 System Menu – Firmware & Misc.

Firmware

Current Firmware Version Displays the current version.

Firmware Upgrade Press "Upgrade" to upgrade the firmware.

NOTE *To perform a Firmware Upgrade, you will need to connect a USB flash device with the latest version of the firmware. Do not disconnect the USB device or turn off the power to the unit during the upgrade; this can cause the system to fail to recover, requiring factory service to repair.*

Configurations

Load Factory Default Click "Load" to restore all menu settings to the default values. User Account, Network Setting, and Time are not affected.

Load From USB	Click “Load” to upload saved DVR configuration settings from a USB flash device.
Save To USB	Click “’Save” to save the current DVR configuration settings to a USB flash device.
Language	Choose which language the DVR uses. The available languages may vary based on region.

4.11 Information

4.42 is a screenshot of the **INFORMATION MENU**. This menu displays important system information.

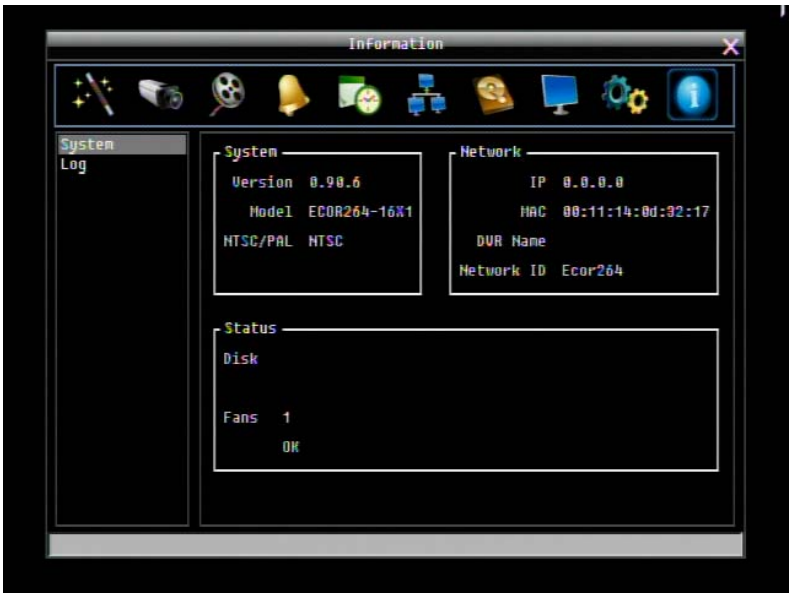


Figure 4-42 Information Menu – System

4.11.1 System

System

Version	Displays firmware version number.
Model	Displays DVR model number.
NTSC/PAL	Displays current video format.

Network

IP	Displays the DVR’s current IP Address.
MAC	Unique address of the DVR’s internal network card. This option cannot be changed.
DVR Name	Displays DVR DDNS name
Network ID	The ID number for the PowerCon alarm network.

Status

Disk Displays disk status; normal disk operation is indicated by “OK”.

Fans Displays fan status; normal fan operation is indicated by “OK”.

4.11.2 Log

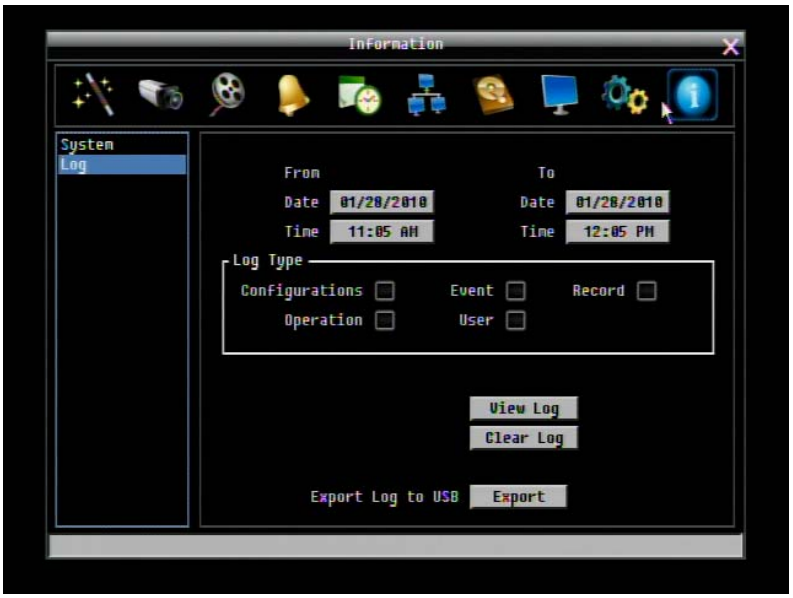


Figure 4-43 Information Menu – Log

From

Date Select start date of log to be displayed.

Time Select start time of log to be displayed.

To

Date Select end date of log to be displayed.

Time Select end time of log to be displayed.

Log Type

Configurations Configuration changes

Event Recording and system events

Record Recording activities

Operation Other operations

User User logins / logouts

View Log Press “View Log” button to view the log. See Figure 4-44 for more detail.

Clear Log Press “Clear Log” button to clear the log.

Export Log to USB Press “Export’ button to export log data to USB.

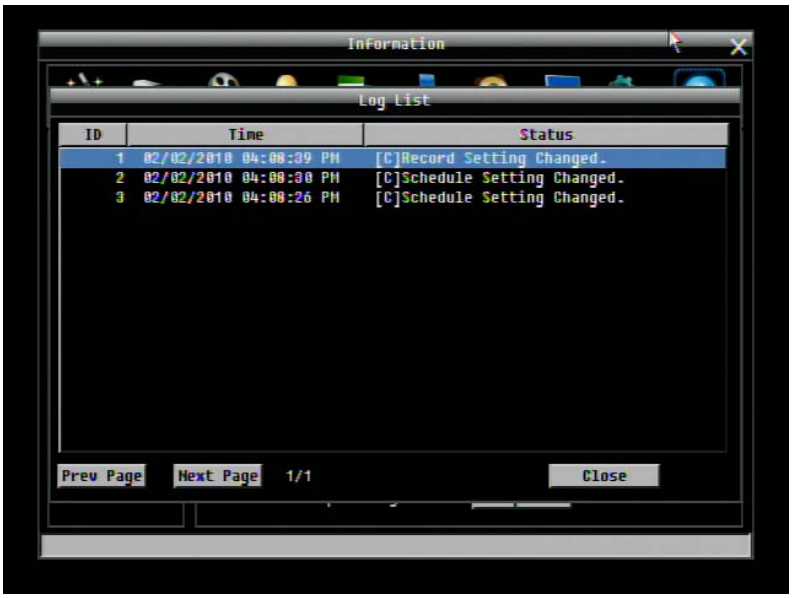


Figure 4-44 Log List

Prev Page Go to the previous page of log.

Next Page Go to the next page of log.

Close Close the window

Chapter

5

5 Networking Overview

This chapter will give you a basic instruction on how to set up the DVR for network connection. It is highly recommended that you have a working knowledge of what a network is and how it works. This will be helpful in completing the networking process.

5.1 Introduction to TCP/IP

TCP/IP is the group of protocols used by the Internet and most Local Area Networks (LANs) throughout the world. In TCP/IP, every computer or other communications device that is connected to the network has a unique IP address. By doing this you are giving your device a unique address similar to the address of your house. An IP address is composed of four octets (numbers in the range of 0 to 255) separated by decimal points. The IP address is used to uniquely identify a host or computer on the LAN. For example, one computer on a network could have an IP address of 192.168.1.127.

You should never give two or more devices the same exact IP address, but the first three octets of an IP address is often the same for all computers in the local area network. For example, if a total of 253 computers exist in a single LAN, the IP addresses could be assigned starting with 192.168.1.*x*, where *x* represents a number in the range of 2 to 254. In IPP address could be compared with a telephone number.

5.2 Subnet Masks

Each host in a LAN has a subnet mask. The *subnet mask* is a set of octets that is used to determine which LAN or class it belongs to. The number 255 is usually used to represent the network address portion of the IP address and a zero is placed at the end to identify the host portion of the address. Basically the subnet mask tells the devices how the network addresses are organized, and helps to determine which addresses are local and which are remote (on the other side of the router).

5.3 Gateway Address

Addressees are either local or remote. A *gateway address* is composed of four octets separated by decimal points. The gateway address is used to uniquely identify the device on the LAN that has access to the communications links connecting to other LANs, WANs and/or the Internet (access to the ‘remote’ addresses).

5.4 Virtual Ports

A **port number** represents a "channel" or entryway for network communications. Port numbers allow different computers to utilize network resources without interfering with each other. Port numbers most commonly appear in network programming, particularly socket programming. Sometimes, though, port numbers are made visible to the casual user. For example, some websites on the Internet use a URL like the following:

http://www.fakeaddress.com:8100/

In this example, the number 8100 refers to the port number used by the browser to connect to the web server. The standard port number used by web sites is 80, so this number does not need to be included with the URL (although it can be). In IP networking, port numbers can theoretically range from 0 to 65535. Most popular network applications, though, use port numbers at the lower end of the range (such as 80 for HTTP). Ports are similar to doors and windows of your house, with port 80 acting as the front door. If these are not open you could not enter the house. This is the same case with ports on a network. If the ports for a specific IP address are not open then you could not gain access to that IP address.

> **Note:** *The term port also refers to several other aspects of network technology. A port can refer to Ethernet connection points, such as those on a hub, switch, or router. The term port is also used to refer to a physical connection point for peripheral devices such as serial, parallel, and USB ports.*

Another analogy would be: if a WAN IP address is similar to the phone number identify a site, IP ports are similar to telephone extensions, in that they allow communication with specific devices within a site that all share the same external (WAN) IP address. A router is a device which allows multiple computers and other IP enabled equipment to share that single WAN IP address. It functions like a “switchboard operator” – opening ports creates an association between those port numbers and the LAN IP address of specific equipment on the LAN behind the router. When the router sees a ‘call’ for a specific ‘extension’ (port), it directs that data stream to the (LAN IP address of the) equipment associated with that ‘extension’ (port).

5.5 Pre-Installation

Before beginning the installation, please answer the following questions:

Do you have Hi-speed Internet? _____

There are many types of high speed Internet available. The most common ones are T1, Cable, and DSL (in order of speed). The DVR is not compatible with a dial-up connection.

- **Note:** *EverFocus suggests having a minimum upload speed of 256KBps. This can be addressed by your Internet Service Provider.*

What type of modem/router do you have? _____

Modem/router model name/ #

The modem/router was either installed by your Internet service provider or purchased by you to establish a connection to the Internet. A router assigns different internal IP addresses to local computers; this allows multiple computers to access the Internet through the same external IP address.

Do you have a static IP address? _____

A Static IP address means you use the same IP address every time you connect to the Internet. With a static IP address, other Internet users always know the address of your location and can easily connect with it. This makes it much simpler to host a website, email server, or other type of server connection. Everfocus suggests using a static IP address. If this is not available, you will need to use a dynamic IP address. This is explained below.

Do you have a dynamic IP address? _____

A Dynamic IP address means your IP address changes each time you connect to the Internet. We recommend asking your Internet service provider for a Static IP address. If this is not a possibility, you may use the DDNS feature of the DVR. DDNS stands for Dynamic Domain Name Server, a service that provides a central database where IP information can be stored and retrieved. It allows those using a dynamic IP address to be registered centrally so users can connect to it by name. See Chapter 7 for details on using EverFocus DDNS.

What type of DVR are you installing? _____

The default ports are
ECOR264: 80
Paragon: 80
ECOR: 80, 1600
EDR/EDVR: 80, 1600, and 37260 – 37263

If the ports were changed in the Network Setup, use those port numbers.

5.6 What is your Network Setup?

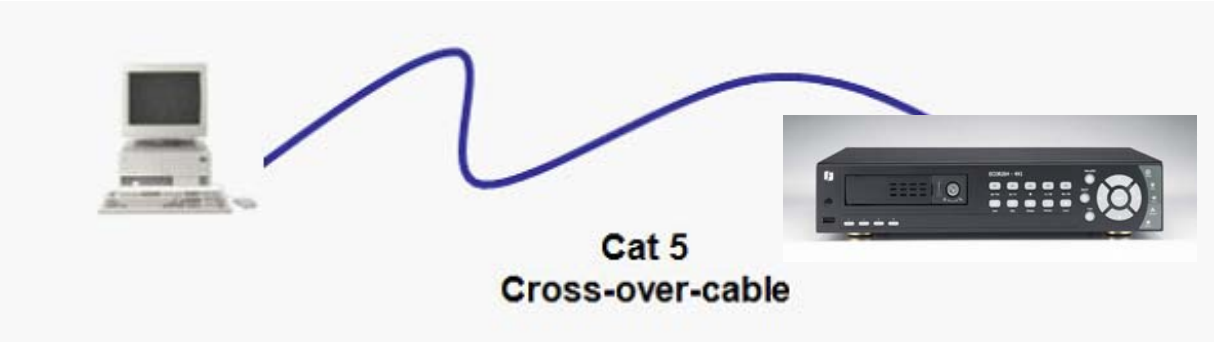
Everfocus DVR's can operate using one of three types of networking connections.

1. Simple One to One Connection: A simple one to one connection is the simplest type of network connection. It uses a cross-over cable to make a direct connection from one computer to another (or in this case a computer to a DVR).

2. Direct High Speed Modem Connection: A direct modem connection uses a standard network cable to connect the modem directly to a computer (or in this case a modem to the DVR). This type of connection only covers single-port modems. For a combination modem/router, use the setup described below.

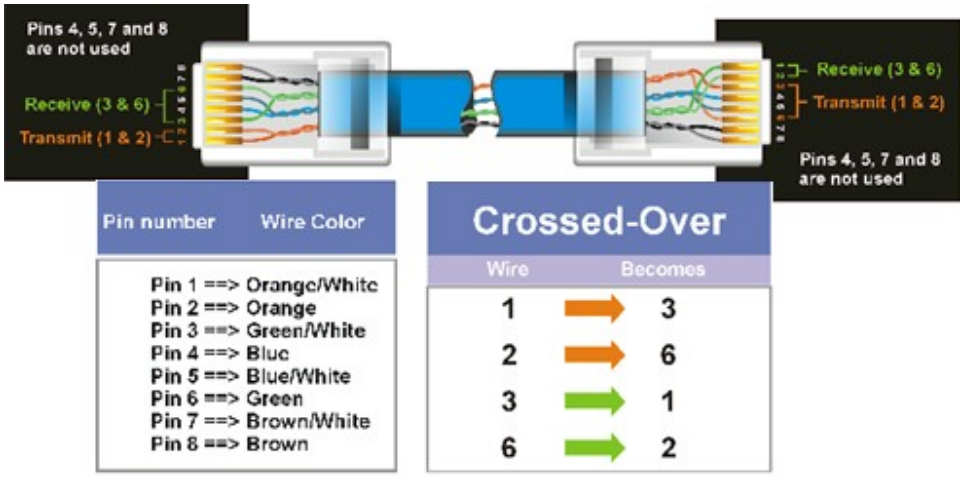
3. Router or LAN Connection – A local area network connection requires either a router or a pre-existing LAN connection. This is the most common type of connection. A router allows multiple computers and DVR's to access each other as well as the Internet. It assigns different internal IP addresses to the computers.

5.7 Simple One to One Connection



Crossover Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a cross-over cable.

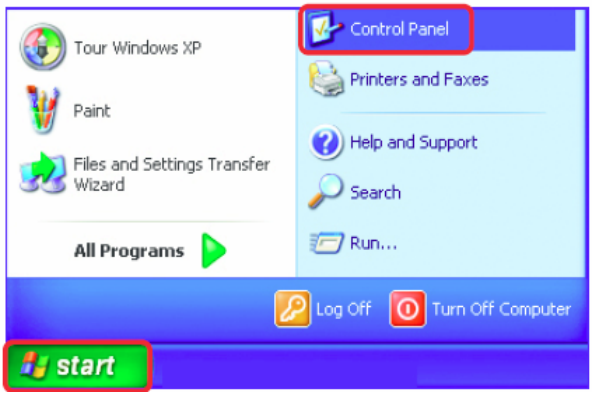


Connection Procedure:

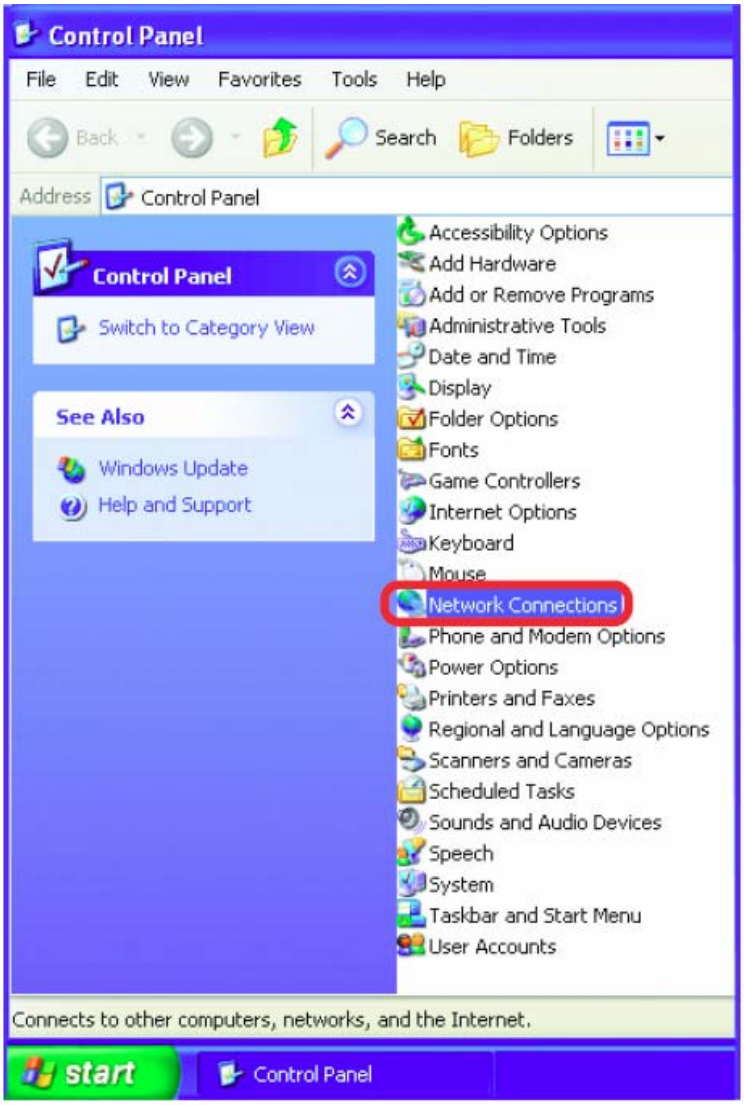
- The First step is to purchase or make a cross-over cable. We recommend purchasing one if you have never made a cross-over cable. Please remember you can not use a straight through network cable for this application
- Once you have a cross-over cable plug one end into the LAN port on the back of the DVR and the other into the network card on the back of the computer.
- Log into the EverFocus DVR menu and go to the Network Setting Menu.
- You must use the Static IP option for this type of connection.
- Assign an IP of 192.168.001.003, a Subnet Mask of 255.255.255.000, and a Gateway of 192.168.001.001. You can ignore DNS Server.
- The next step is to set the computer's network settings to match those of the DVR. You will need Administrator privileges on your Windows machine to do this.

➢ To assign a fixed IP address in Windows 2000/XP.

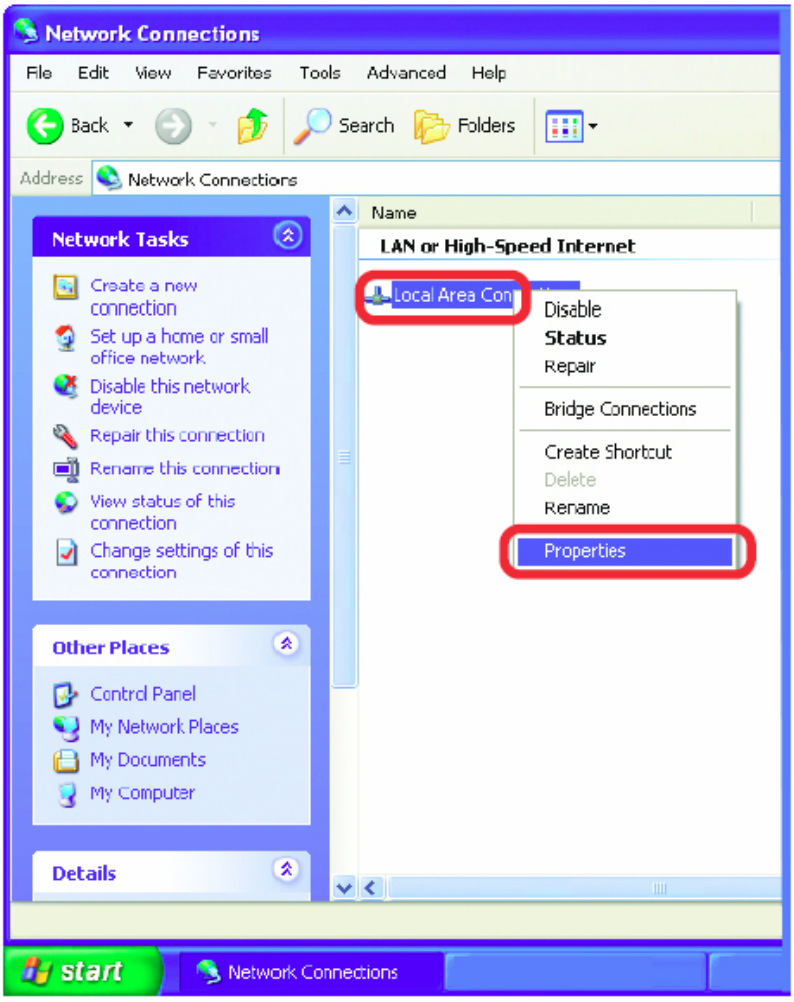
- Go to **Start**
- Double-click on **Control Panel**



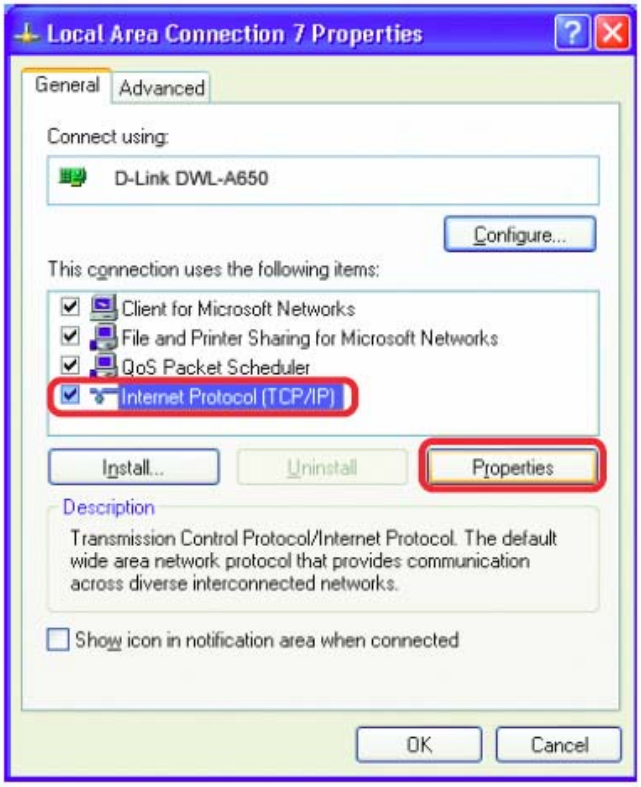
- Double-click on **Network Connections**



- Right-click on **Local Area Connections**
- Double-click on **Properties**



- Click on **Internet Protocol (TCP/IP)**
- Click **Properties**



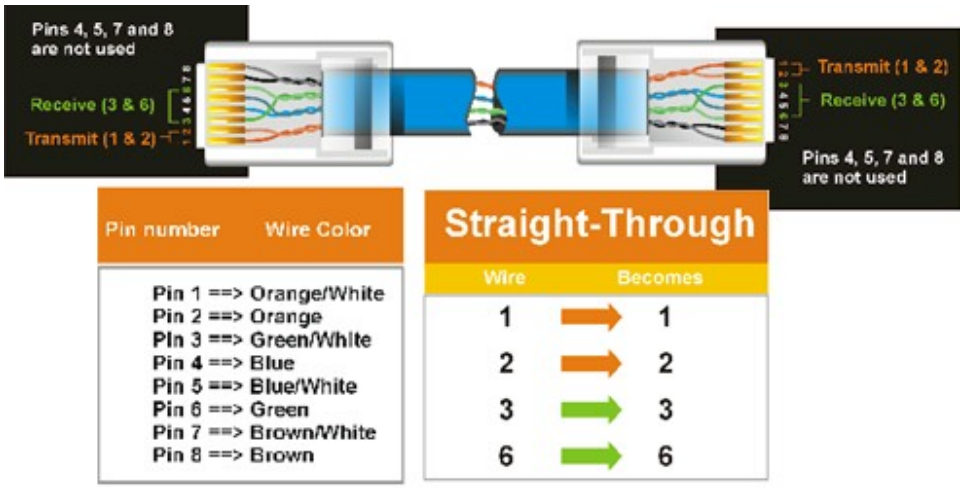
- Click on the option that says “Use the following IP address”
- Assign an IP address of 192.168.1.2, a Subnet Mask of 255.255.255.0, and a Default Gateway of 192.168.1.1, then click OK.
- Restart both the computer and the DVR.
- To access the DVR from the computer, simply open Internet Explorer and in the address bar type:

  http://192.168.1.3

5.8 Direct High Speed Modem Connection

Straight Through Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a straight cable.



Connection Procedure:

- The first step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application

- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the high speed modem.

- Log into the EverFocus DVR menu and go to the Network Setting Menu.

- Input the Static IP address, the Subnet Mask, and the Gateway that you obtained from the internet service provider.

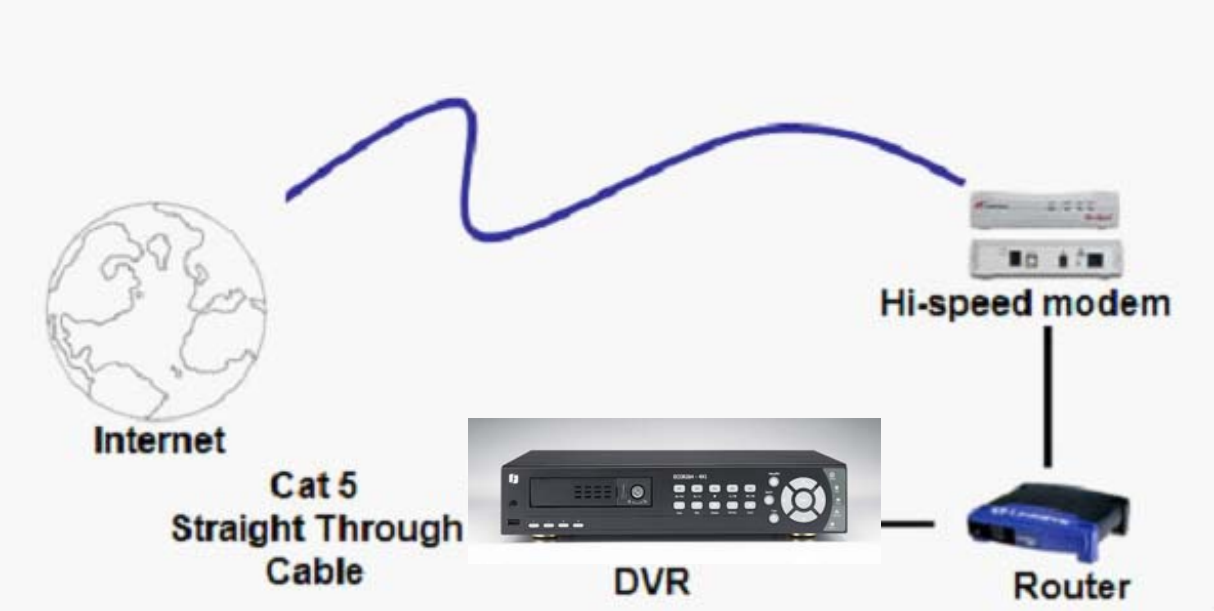
- **Note:** *If you have a dynamic IP address, you can set the DVR to DHCP to automatically detect the network settings. Therefore, it can use a dynamic IP address.*

- Exit from the DVR's Menu to save the settings.

- To access the DVR from a computer, open Internet Explorer and in the address bar type:
  http:// (IP address given by your internet service provider)

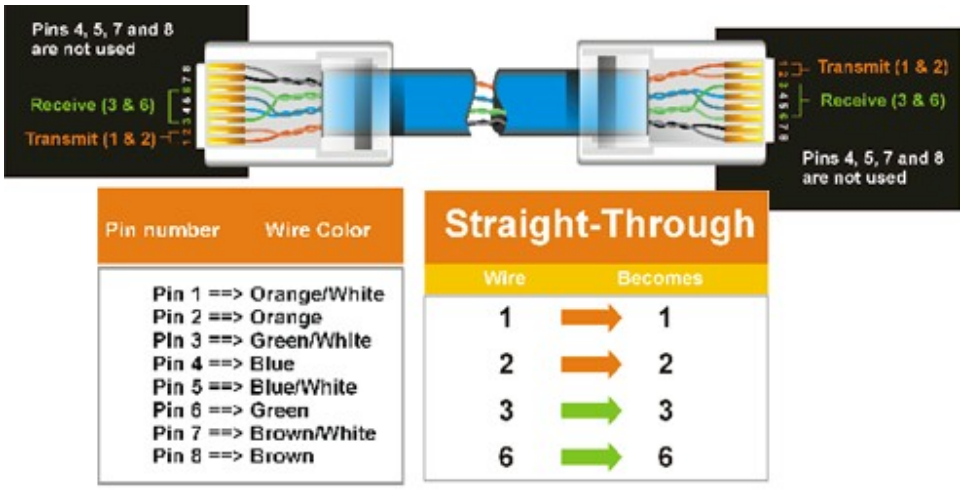
  - *Note: When using this type of connection, only one device can be connected to the modem at a time. You will need to use a computer at a different location to test the connection.*

5.9 Router or LAN Connection



Straight Through Ethernet Cable Pin outs:

The Figure below shows the pin configurations for a straight cable.



Connection Procedure:

- The First step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application

- Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the router.

- Log into the EverFocus DVR menu and go to the Network Setting Menu.

- To let the router automatically assign an address:

  - Set the Network Type to DHCP. Make sure to write down the IP address and the Gateway.

  - Exit from the Menu to save settings.

  To manually assign an address:

  - Go to a computer connected on the same network as the DVR.

  - Click on the Start button and choose Run.
    - If using Windows Vista, choose Search instead.

  - Type "command" and click on OK.
    - In Vista, you will need to double-click on the "Command Prompt" file to open it..

  - In the DOS prompt, type "ipconfig" and press Enter.

  - The network information will be displayed on a screen similar to the one below.
    - In Windows Vista, look for the information that says "IP v4".

Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.
C:\Documents and Settings\Steven>ipconfig
Windows IP Configuration
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IP Address. . . . . : 192.168.0.80
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.0.1
C:\Documents and Settings\Steven>

  - Take the values for Subnet Mask and Default Gateway and input them into the DVR; these values should be exactly the same in both devices. However, you should change the last number of the IP address. For example, if the IP address of the computer is 192.168.2.101, the DVR's IP address should be 192.168.002.050.

- To access the DVR from a computer simply open Internet Explorer and in the address bar type: http:// (IP address of the DVR)

  - **Note:** *The DVR's IP address will only work at the location of the DVR. To connect from a different location over the Internet, see below.*

To set DVR for Internet Connection through router

- The next step is to open ports within your router. Log into the router using a PC and open the following ports.

    - Ports to open: 80, 1600
    - If your Internet service provider blocks port 80, you can change it to a different port in the DVR's Network Menu Setup.
    - If you are using a Linksys or D-Link router, see Chapter 9 for basic support on setting up ports. For any other router, you will need to contact the manufacturer for support.

- To access the DVR from a computer simply open Internet Explorer and in the address bar type:
  http:// (the IP address given by your internet service provider)

    - **Note:** *If you changed to a different port other than 80, you will need to include this at the end of the IP address*

- If you have a Dynamic IP address and have opened the ports, go to the next chapter to setup DDNS.

Chapter

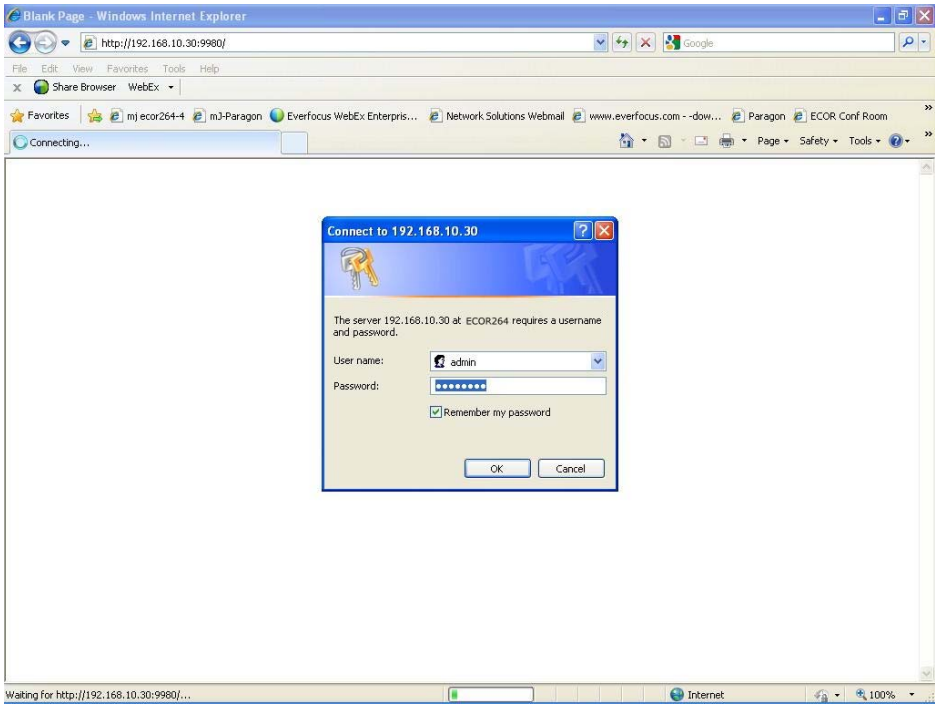
6

6 REMOTE OPERATION FROM BROWSER

6.1 Connecting to ECOR264

To access the DVR from a computer, open an Internet Explorer window and in the address bar type:

Local connection: http:// (IP address from the DVR's Network Menu): IP port used
Internet connection: http:// (IP address given by your Internet Service Provider): IP port used

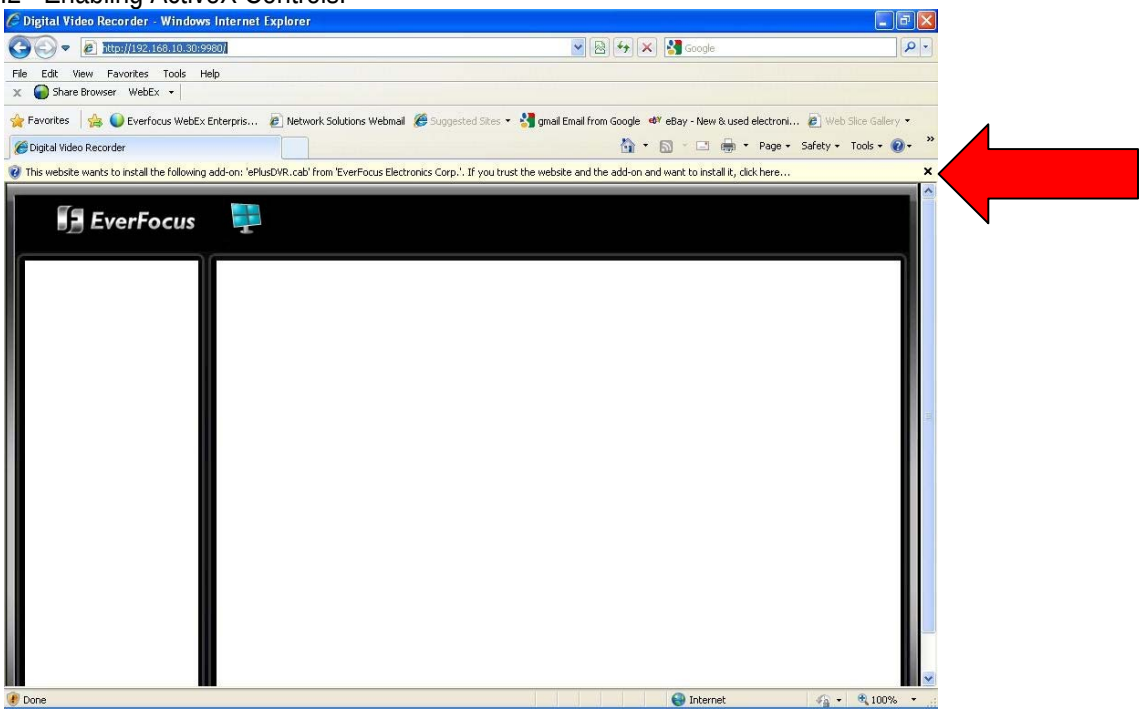


- The login page will appear on the screen similar to the one shown above.
- Enter a user name and password to access the recorder. These can be changed in the System section of the Main Menu.
- The default user name is "admin". The default password is "11111111".
- Click on the Login button and you will log in to the recorder's Network Viewer.

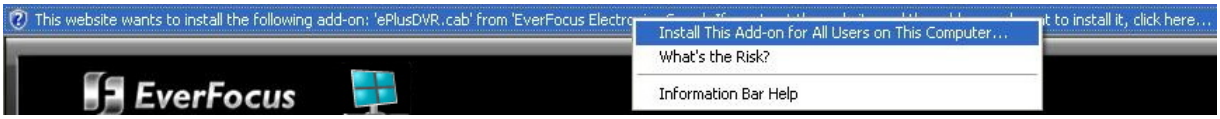
Browser Security Setting

4.11.3 Installing ActiveX controls

When you first connect to the DVR's IP address, you should see a screen like the one below. If you do not see a yellow bar like the one the arrow is pointing at, your security settings may be too high. If so, go to "Section 6.2.2 - Enabling ActiveX Controls."


Digital Video Recorder - Windows Internet Explorer
This website wants to install the following add-on: 'ePlusDVR.cab' from 'EverFocus Electronics Corp.'. If you trust the website and the add-on and want to install it, click here...
EverFocus
Done
Internet

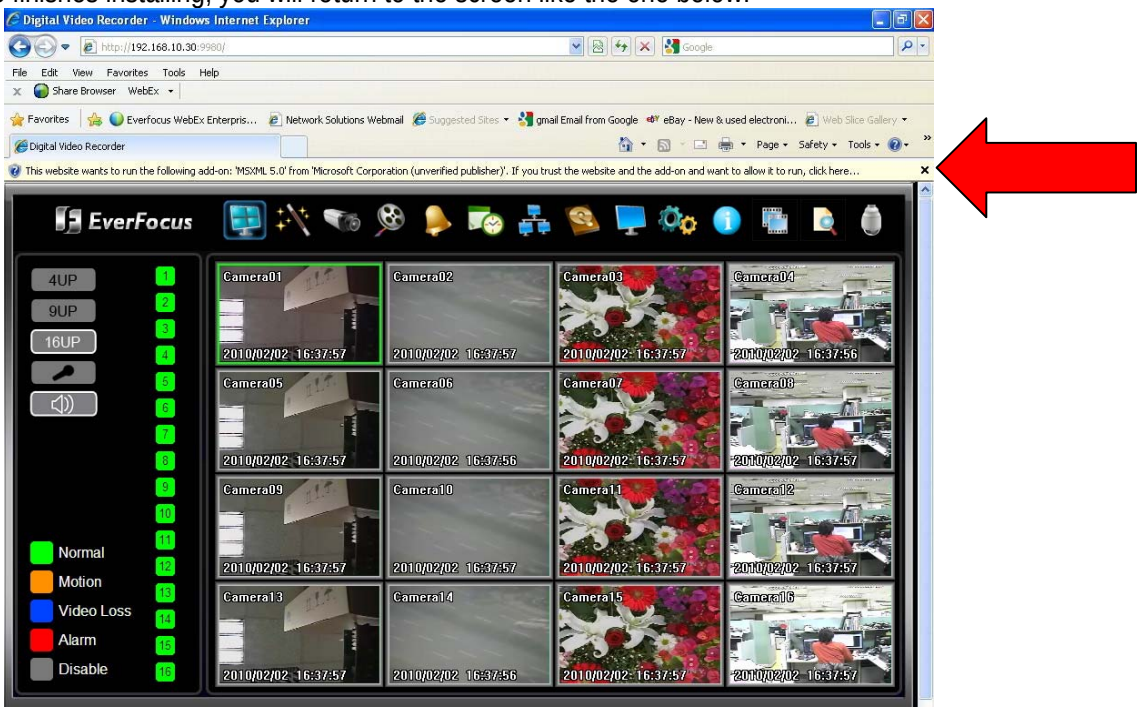
Right click on the yellow bar and select "Install This Add-on…"


This website wants to install the following add-on: 'ePlusDVR.cab' from 'EverFocus Electro
to install it, click here...
Install This Add-on for All Users on This Computer...
What's the Risk?
Information Bar Help
EverFocus

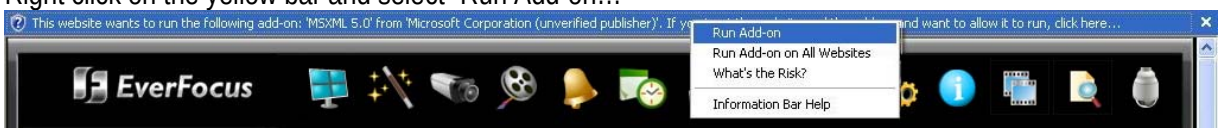
Install the ePlusDVR.cab file when prompted to do so.

Internet Explorer - Security Warning
Do you want to install this software?
Name: ePlusDVR.cab
Publisher: EverFocus Electronics Corp.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Once the file finishes installing, you will return to the screen like the one below.



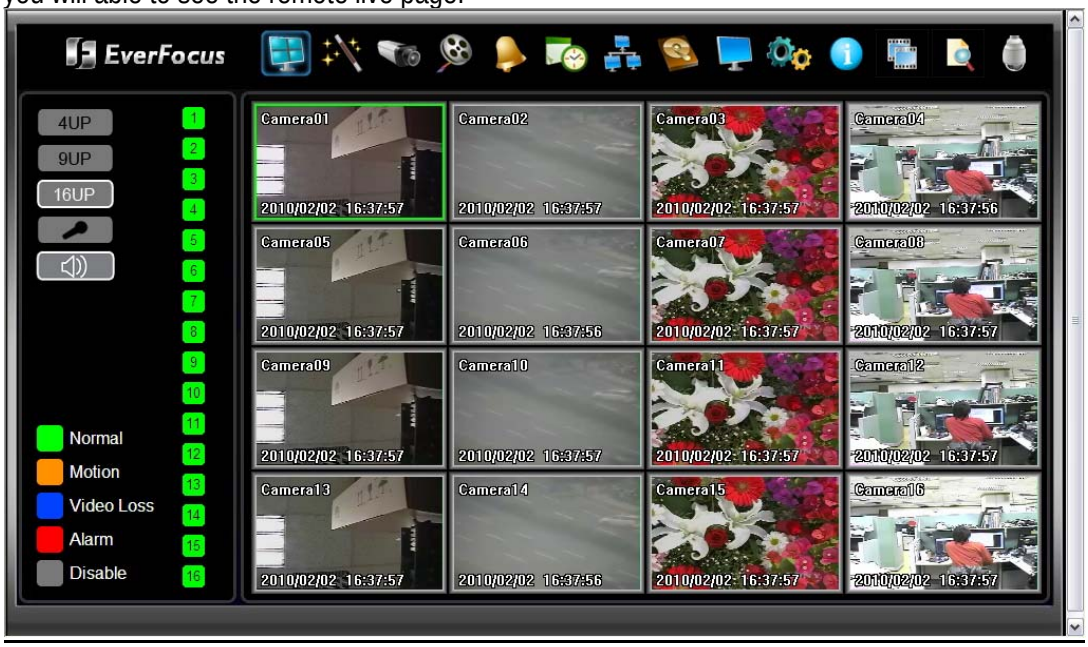
Right click on the yellow bar and select “Run Add-on…”


This website wants to run the following add-on: 'MSXML 5.0' from 'Microsoft Corporation (unverified publisher)'.
Run Add-on
Run Add-on on All Websites
What's the Risk?
Information Bar Help
EverFocus

Install the MSXML file when prompted to do so.

Internet Explorer - Security Warning
Do you want to run this ActiveX control?
Name: MSXML 5.0
Publisher: Microsoft Corporation (unverified publisher)
Run
Don't Run
This ActiveX control was previously added to your computer when you installed another program, or when Windows was installed. You should only run it if you trust the publisher and the website requesting it. What's the risk?

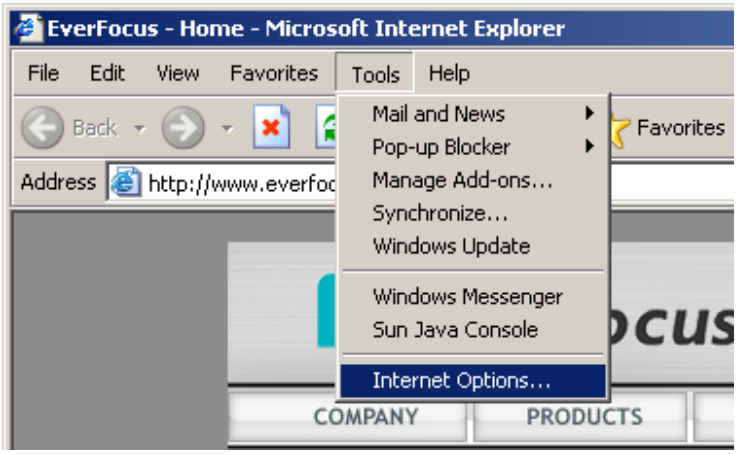
Now, you will able to see the remote live page.



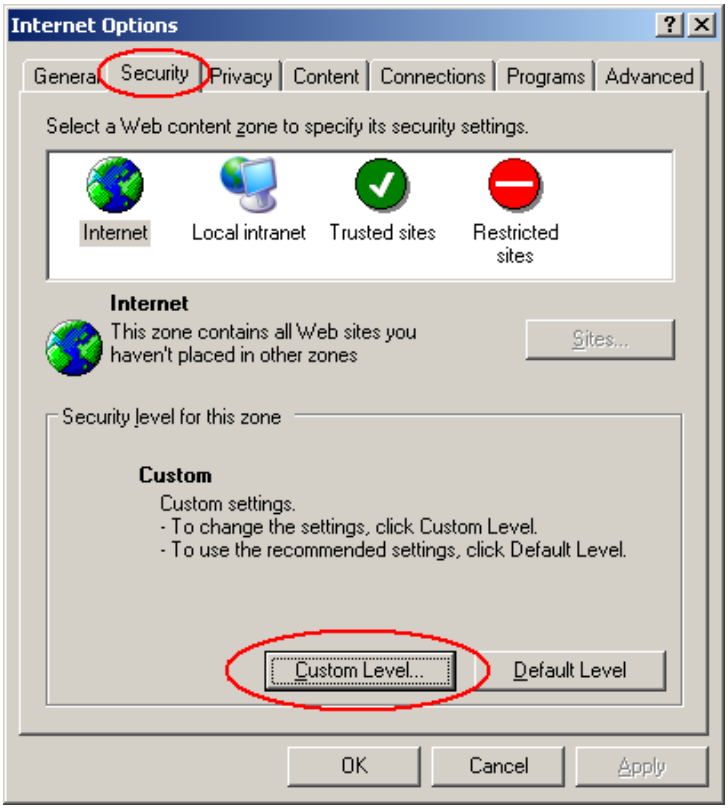
4.11.4 Enabling ActiveX Controls

Note: *This section is only necessary if you DO NOT see the yellow ActiveX bar at the top of your browser screen when you first connect to the DVR.*

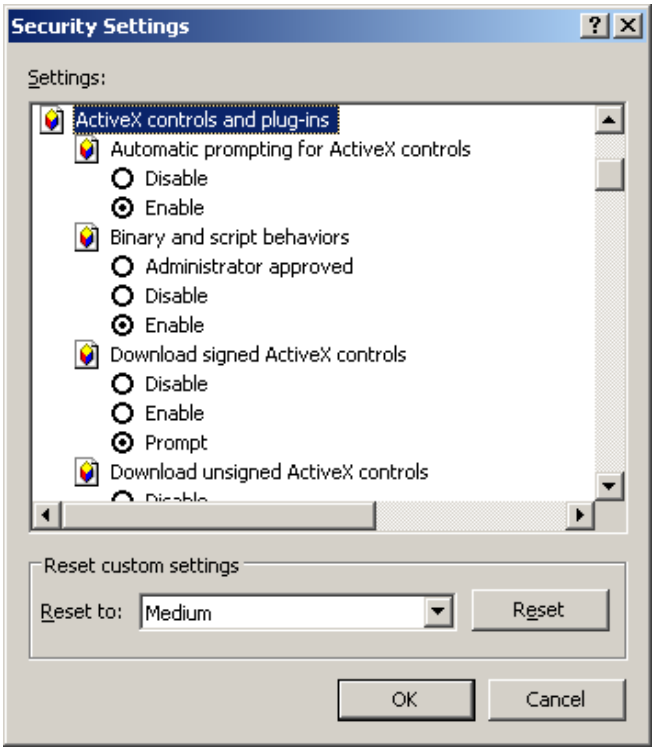
At the top of the Internet Explorer Window, click on Tools, then select Internet Options.



Click the Security tab at the top of the window, then choose Custom Level near the bottom.



In the Security Settings window, scroll to “ActiveX controls and plug-ins”



Set the controls as follows:

“**Enable**”:
- ✓ Allow previously unused ActiveX controls to run without prompt (*Internet Explorer 7 only*)
- ✓ Allow scriptlets (*IE7 only*)
- ✓ Automatic prompting for ActiveX controls
- ✓ Binary and script behaviors
- ✓ Display video and animation on a webpage that does not use external media player (*IE7 only*)
- ✓ Run ActiveX controls and plug-ins
- ✓ Script ActiveX controls marked safe for scripting

“**Prompt**”:
- ✓ Download signed ActiveX controls
- ✓ Download unsigned ActiveX controls

“**Disable**”:
- ✓ Initialize and script ActiveX controls not marked as safe

Click OK and then choose Yes to change the security settings.

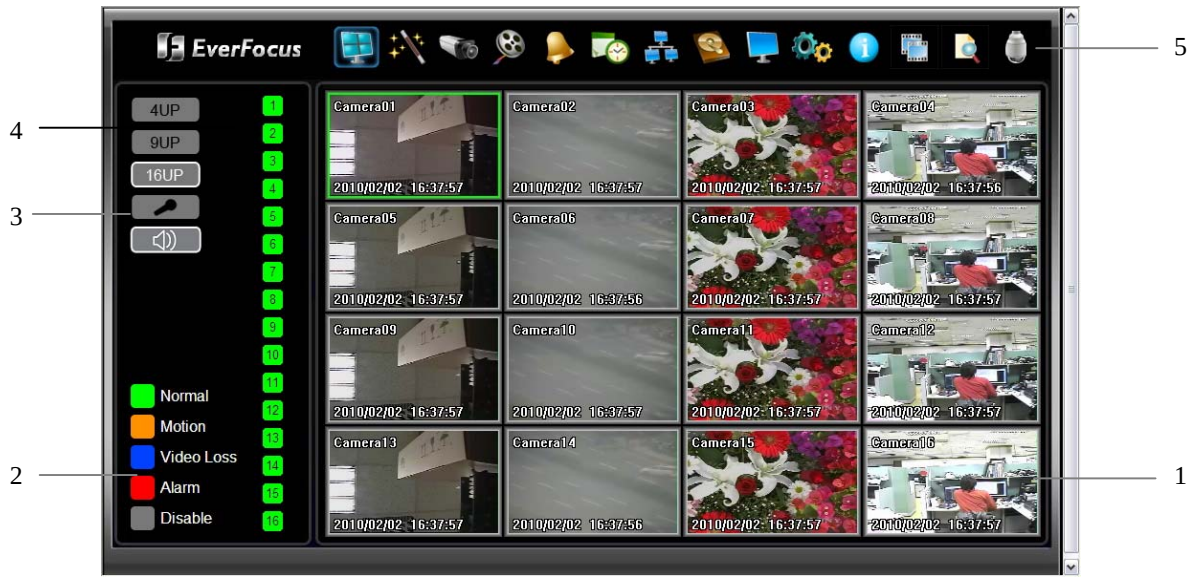
Close the window so you are back at the login screen.
Click the Refresh button to reload the page.

Internet Explorer - Security Warning
Do you want to install this software?
Name: ePlusDVR.cab
Publisher: EverFocus Electronics Corp.
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

Install the ePlusDVR.cab file when prompted to do so.

Once the file finishes installing, you will return to the same login page as before.
Type in the user name and password and click Login to view the cameras.
Default user name: admin
Default password: 11111111.

6.2 Remote Live View

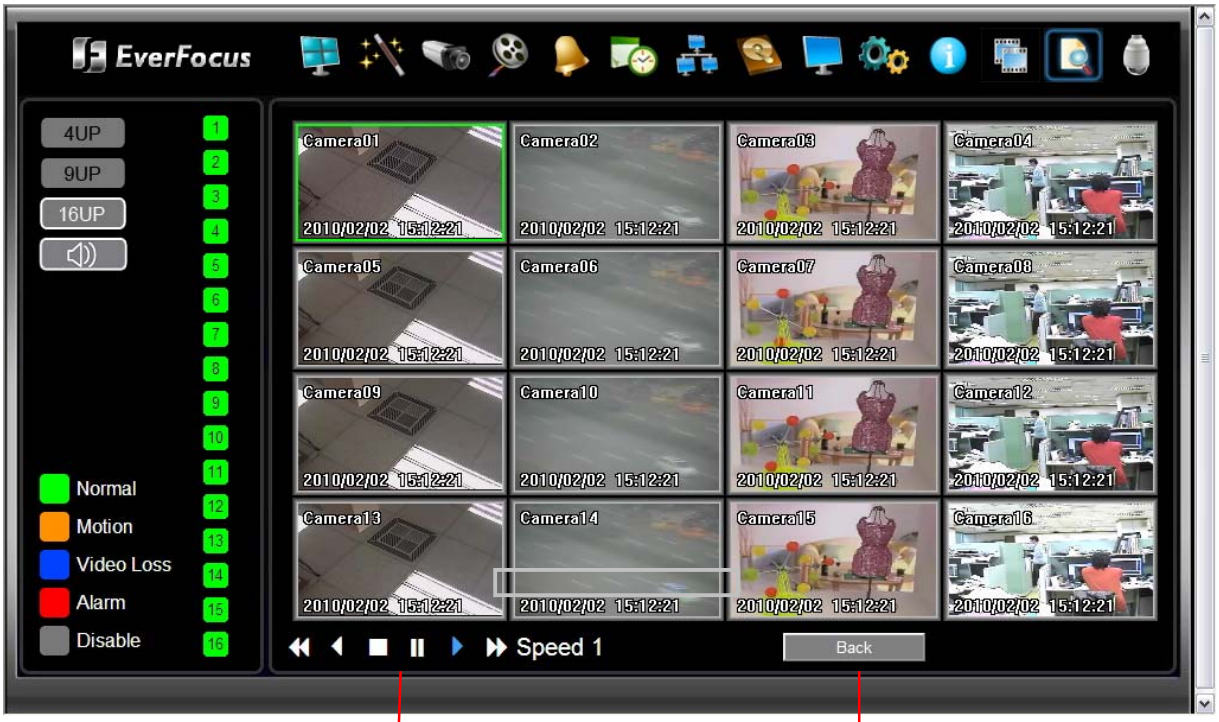


1. In the main page, you will see live images in a 16-screen display (or 4/9 screens, depending on the model).
2. The status of each camera is represented by different colors on the left side of the screen. Green means normal; orange indicates a Motion alarm; blue indicates Video Loss, red indicates an alarm event.
3. You can click the "**Mic**" button to transfer audio to DVR from client side if there is a microphone attached to the PC and an amplifier and speaker attached to the DVR. You can also click the "**Speaker**" button to transfer audio to the client side from DVR if there is a speaker on the PC and a microphone and preamp attached to the DVR, and audio recording is enabled on the DVR. Double click on a camera image to enlarge the current display to full screen; double click again or press "Esc" to return to the normal view.
4. Click on a camera number on the left side of the display to switch that camera to full screen. Click on "4UP" to display 4 screens or click on "9UP" to display 9 screens.
5. There are 14 icons at the top of screen. They have the same functions as the icons in the DVR's Main Menu, though some section menu screens and choices may differ from the local menus.

6.3 Remote Playback

To playback the video, press "Search" button. Select from "Time Search", "Event Search", or "Motion Search". For more details about Search setting, please refer to "3.13 Search Setting".

"Event Search" and "Motion Search" will show maximum 400 search result items (beginning with the start time)



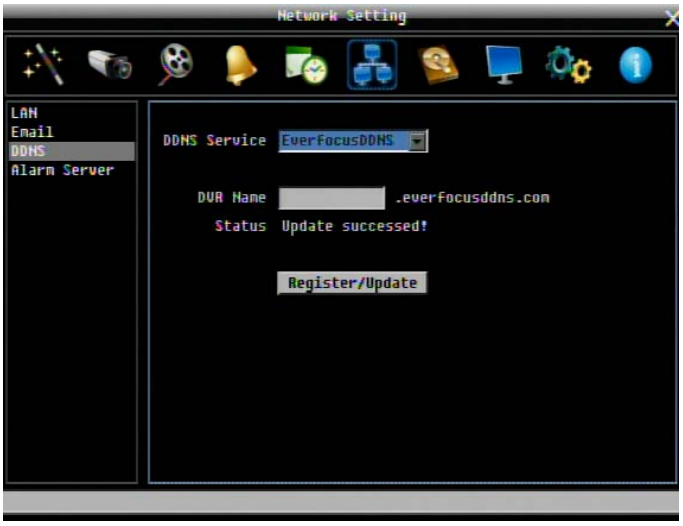
Playback Control Keys:

1. Fast rewind the video.
2. Play Reverse the video.
3. Stop playback.
4. Pause
5. Playback the video.
6. Fast forward the video.

Chapter

7

7 EverFocus DDNS Setup



Setup Steps:

Step 1. Set up the Network Menu according to the instructions detailed in the Networking chapter. (Make sure that DNS Server 1 is set correctly or DDNS will not work)

Step 2. Go to the website http://everfocusddns.com and check for an available name.

Note: This step is optional, though recommended, as it is used to check the availability of a host name. If the name is already used, and attempt to register that name must fail. If the name is available, proceed to step 3 for DDNS setup.

Step 3. In DVR's Network Menu, go to DDNS. Choose "EverfocusDDNS" for the Server and put in your chosen name in the field: DVR Name.

NOTE: The name of the DVR **cannot include a space, or a dot** (period) or **any special characters** particularly **~ ! @ # $ % ^ & * ( ) + < > " ; : . , _**

Step 4. Press "**Register/Update**" button to synchronize the DVR with the DDNS server. You should see an indication of "Success" on the screen. If you see "Could Not Find Server" or any other error message instead, double-check your network settings and DDNS name and resubmit the DDNS name until you get "Success".

Step 5. You should now be able to connect by typing the name you created into the address bar. Example: http://hostname.everfocusddns.com

It is not necessary to append the HTTP port number to the DDNS name. The EverFocus DDNS server not only keeps track of your DVR's IP address, it keeps track of the ports too!

Chapter

8

8 Troubleshooting

If you have problems with the system, run through the following checklist to see if you can solve the problem.

- **The DVR will not go into record mode.**
  - Bring up the DVR's Menu and check under the Camera Menu. Verify that all connected cameras are checked as "Installed" and that Record Mode is set to "Continuous".
  - Check the Disk or Information Menus and verify that the internal hard drive is being detected.

- **The DVR displays nothing on the main monitor.**
  - Make sure the monitor is connected to either the Video Out port or the VGA port. If the monitor has multiple inputs, make sure it is on the correct input source and display setting (1024x768).
  - Check that the monitor cables are good.
  - Verify the recorder is getting the correct supply power.

- **There is no display coming from one of the channels on the DVR.**
  - In the DVR's Camera Menu, make sure that all cameras are checked as "Installed" and unchecked for "Covert".
  - If there is still no picture, switch ports or connect a working camera to the port that has no picture. If you get an image, the problem is coming from the camera or cable.

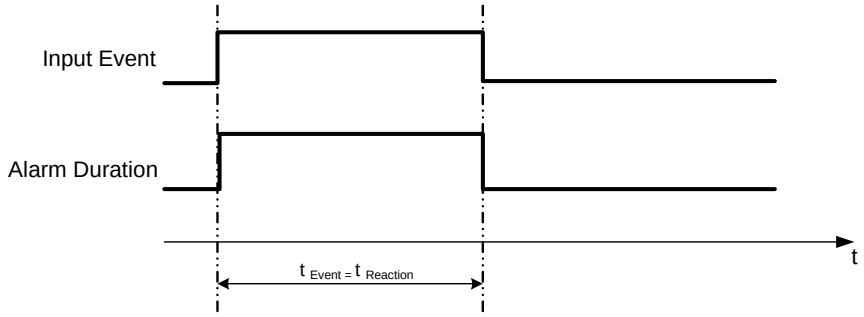
- **I cannot connect to the recorder via the internet.**
  - Check that you can connect to the DVR on the LAN.
  - Check that the DVR has a static IP address and the port used by the DVR is forwarded correctly to that address in the router.
  - Verify that your Internet Service Provider does not block the IP port being used
  - Make sure you are using the correct WAN IP address given by the ISP, or, if you have a Dynamic IP, check if the number has changed; use DDNS to avoid problems caused by changing ISP addresses.

Appendix

A

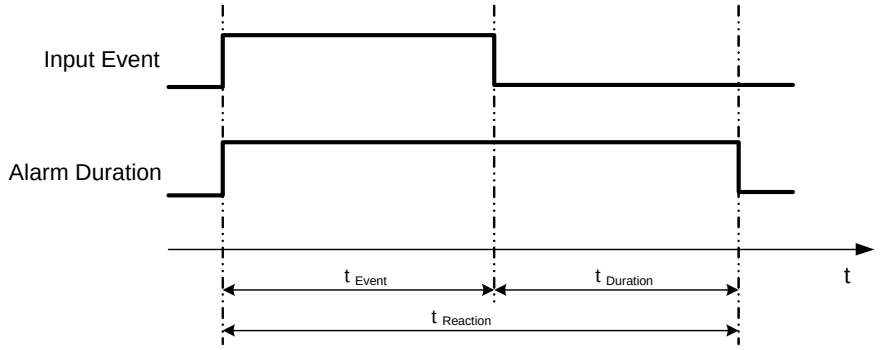
Appendix A: Timing Of Alarm Modes

Transparent Mode



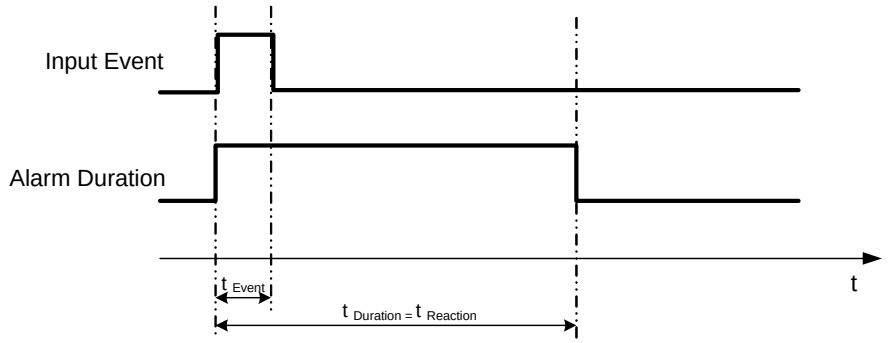
t Event: Duration of alarm input source (motion, contact, system events...)
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout + Transparent Mode



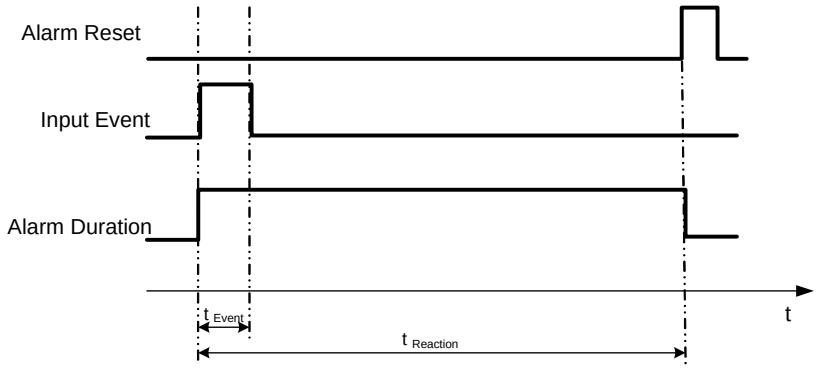
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode



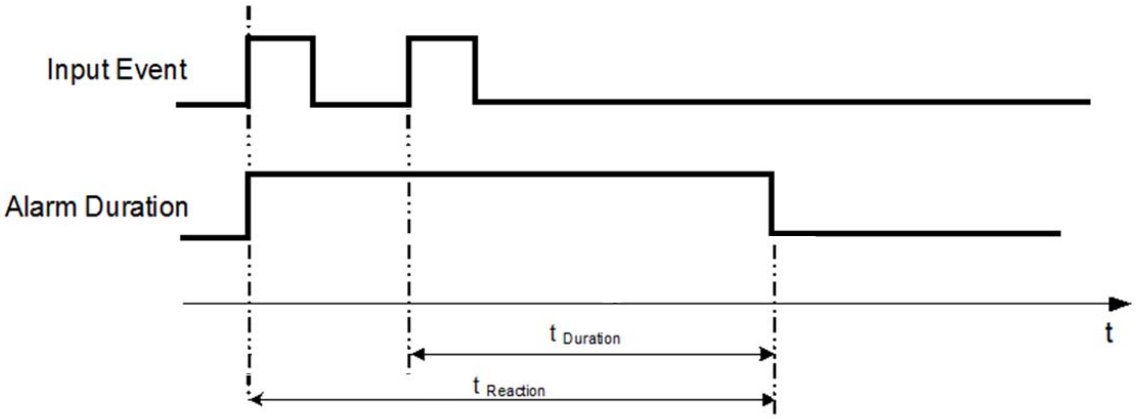
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Permanent Mode



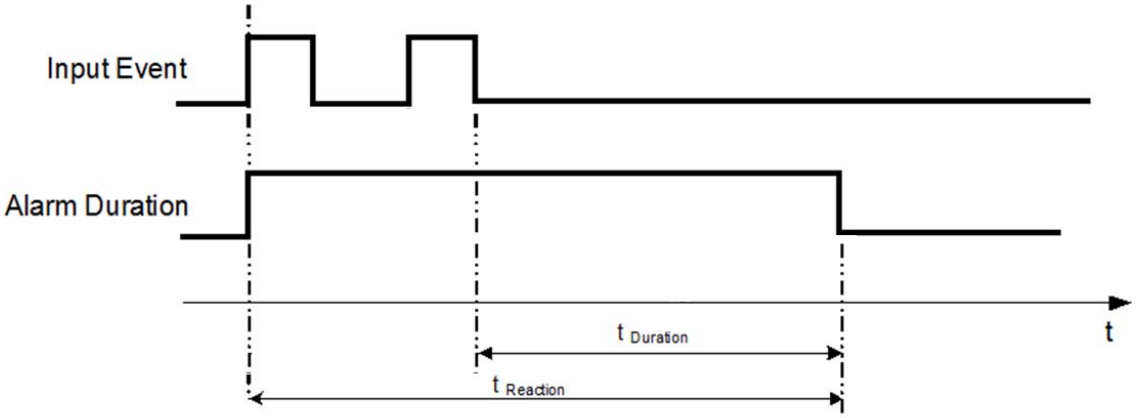
t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout Mode: Retrigger of Alarms



t Event: Duration of alarm input source (motion, contact, system events...)
t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Timeout+Transparent Mode: Retrigger of Alarms



t Event: Duration of alarm input source (motion, contact, system events...)

t Duration: Alarm duration for timeout, defined in the event setup menus
t reaction: Resulting duration for this alarm mode, related to event record, alarm outputs, OSD message, buzzer

Appendix

B

Appendix B: EXPRESS SETUP RECORDING VALUE SELECTION RULES

Case 1:
Record Mode: Normal + Event Record With: Recording days

The DVR will Auto adjust image Quality and Event frame rate to match the number of Recording days which user selected:
According to resolution, event hours and other assumptions above, the DVR will attempt to select one set of suitable quality and event frame rate by checking if set 1 meets the requirements, and proceed in order unit the requirements are met. If the DVR can't match the required record days from one of the 8 sets, it will use set 8.

Checking Order	1	2	3	4	5	6	7	8
Normal Frame Rate	1	1	1	1	1	1	1	1
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	25	25	25	12,5	8	6,25	5	1

Case 2:
Record Mode: Event Only Record With: Recording days
DVR will Auto adjust Quality and Event frame rate to match the Recording days which user need:
According to resolution, event hours and other assumptions above, the DVR will attempt to select one set of suitable quality and event frame rate by checking if set 1 meets the requirements, and proceed in order unit the requirements are met. If the DVR can't match the required record days from one of the 8 sets, it will use set 8.

Checking Order	1	2	3	4	5	6	7	8
Quality	Superior	Standard	Low	Low	Low	Low	Low	Low
Event Frame Rate	25	25	25	12,5	8	6,25	5	1

Case 3:
Record Mode: Normal + Event or Event Only
Record With: Preset Setting
DVR will apply the settings in the table below to all cameras according to the Preset Settings.

Preset Setting Option	Camera Item	Apply value
Best Quality	Quality	Superior
	Normal Frame Rate	Max recording frame rate of DVR
	Event Frame Rate	25
Standard Quality	Quality	Standard
	Normal Frame Rate	Half of max recording frame rate of DVR
	Event Frame Rate	25
Extended Quality	Quality	Basic
	Normal Frame Rate	1
	Event Frame Rate	8

Appendix

C

Appendix C: Remote control

The IR remote control is an accessory to enhance the convenient operation of the DVR. You can perform all the settings and operations from the remote control. The effective distance is up to 33 feet line of sight. The keypad functions are same as the front panel buttons of the DVR.

ID number here must correspond to the “IR Remote ID” in “I/O Control Setup Menu”. Used to select a DVR when there is more than one unit. Selecting an incorrect unit ID will prevent the DVR from responding to commands from the remote.

Channel keys #1~16

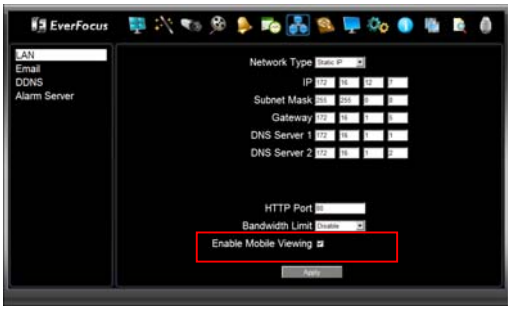
Appendix

D

Appendix D: Mobile phone viewing

The Ecor264 DVR provides an independent stream for mobile phone viewing.
This function supports live view of a single camera in CIF resolution.

Enabling mobile phone stream:



Enable in NETWORK > LAN menu the check-box "Enable Mobile Viewing"

Access by mobile phone:

Open the internet browser at mobile phone and enter the IP-address:

http://[IP-Address of your DVR]**/m/live.htm**

After login with standard username/password the browser screen will appear with this layout:

EverFocus Electronics Corp.

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12F, No.79 Sec.1 Shin-Tai Wu Road,
Hsi-Chi, Taipei, Taiwan
Tel: +886-2-26982334
Fax: +886-2-26982380
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